Antitrust Guidelines for the Licensing of Intellectual Property

Issued by the
U.S. Department of Justice*
and the
Federal Trade Commission

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* These Guidelines supersede section 3.6 in Part I, "Intellectual Property Licensing Arrangements," and cases 6, 10, 11, and 12 in Part II of the U.S. Department of Justice 1988 Antitrust Enforcement Guidelines for International Operations.

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1. Intellectual property protection and the antitrust laws

1.0 These Guidelines state the antitrust enforcement policy of the U.S. Department of Justice and the Federal Trade Commission (individually, "the Agency," and collectively, "the Agencies") with respect to the licensing of intellectual property protected by patent, copyright, and trade secret law, and of know-how.[1] By stating their general policy, the Agencies hope to assist those who need to predict whether the Agencies will challenge a practice as anticompetitive. However, these Guidelines cannot remove judgment and discretion in antitrust law enforcement. Moreover, the standards set forth in these Guidelines must be applied in unforeseeable circumstances. Each case will be evaluated in light of its own facts, and these Guidelines will be applied reasonably and flexibly.[2]

In the United States, patents confer rights to exclude others from making, using, or selling in the United States the invention claimed by the patent for a period of seventeen years from the date of issue.[3] To gain patent protection, an invention (which may be a product, process, machine, or composition of matter) must be novel, nonobvious, and useful. Copyright protection applies to original works of authorship embodied in a tangible medium of expression.[4] A copyright protects only the expression, not the underlying

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[1] These Guidelines do not cover the antitrust treatment of trademarks. Although the same general antitrust principles that apply to other forms of intellectual property apply to trademarks as well, these Guidelines deal with technology transfer and innovation-related issues that typically arise with respect to patents, copyrights, trade secrets, and know-how agreements, rather than with product-differentiation issues that typically arise with respect to trademarks.

[2] As is the case with all guidelines, users should rely on qualified counsel to assist them in evaluating the antitrust risk associated with any contemplated transaction or activity. No set of guidelines can possibly indicate how the Agencies will assess the particular facts of every case. Parties who wish to know the Agencies' specific enforcement intentions with respect to any particular transaction should consider seeking a Department of Justice business review letter pursuant to 28 C.F.R. § 50.6 or a Federal Trade Commission Advisory Opinion pursuant to 16 C.F.R. §§ 1.1–1.4.

[3] *See* 35 U.S.C. § 154 (1988). Section 532(a) of the Uruguay Round Agreements Act, Pub. L. No. 103-465, 108 Stat. 4809, 4983 (1994) would change the length of patent protection to a term beginning on the date at which the patent issues and ending twenty years from the date on which the application for the patent was filed.

[4] *See* 17 U.S.C. § 102 (1988 & Supp. V 1993). Copyright protection lasts for the author's life plus 50 years, or 75 years from first publication (or 100 years from creation, whichever expires first) for works made for hire. *See* 17 U.S.C. § 302 (1988). The principles stated in these Guidelines also apply to protection of mask works fixed in a semiconductor chip product (*see* 17 U.S.C. § 901 *et seq.* (1988)), which is analogous to copyright protection for works of authorship.

ideas.[5]Unlike a patent, which protects an invention not only from copying but also from independent creation, a copyright does not preclude others from independently creating similar expression. Trade secret protection applies to information whose economic value depends on its not being generally known.[6] Trade secret protection is conditioned upon efforts to maintain secrecy and has no fixed term. As with copyright protection, trade secret protection does not preclude independent creation by others.

The intellectual property laws and the antitrust laws share the common purpose of promoting innovation and enhancing consumer welfare.[7] The intellectual property laws provide incentives for innovation and its dissemination and commercialization by establishing enforceable property rights for the creators of new and useful products, more efficient processes, and original works of expression. In the absence of intellectual property rights, imitators could more rapidly exploit the efforts of innovators and investors without compensation. Rapid imitation would reduce the commercial value of innovation and erode incentives to invest, ultimately to the detriment of consumers. The antitrust laws promote innovation and consumer welfare by prohibiting certain actions that may harm competition with respect to either existing or new ways of serving consumers.

2. General principles

2.0 These Guidelines embody three general principles: (a) for the purpose of antitrust analysis, the Agencies regard intellectual property as being essentially comparable to any other form of property; (b) the Agencies do not presume that intellectual property creates market power in the antitrust context; and (c) the Agencies recognize that intellectual property licensing allows firms to combine complementary factors of production and is generally procompetitive.

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[5] *See* 17 U.S.C. § 102(b) (1988).

[6] Trade secret protection derives from state law. *See generally Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470 (1974).

[7] "[T]he aims and objectives of patent and antitrust laws may seem, at first glance, wholly at odds. However, the two bodies of law are actually complementary, as both are aimed at encouraging innovation, industry and competition." *Atari Games Corp. v. Nintendo of America, Inc.*, 897 F.2d 1572, 1576 (Fed. Cir. 1990).

2.1 Standard antitrust analysis applies to intellectual property

The Agencies apply the same general antitrust principles to conduct involving intellectual property that they apply to conduct involving any other form of tangible or intangible property. That is not to say that intellectual property is in all respects the same as any other form of property. Intellectual property has important characteristics, such as ease of misappropriation, that distinguish it from many other forms of property. These characteristics can be taken into account by standard antitrust analysis, however, and do not require the application of fundamentally different principles.[8]

Although there are clear and important differences in the purpose, extent, and duration of protection provided under the intellectual property regimes of patent, copyright, and trade secret, the governing antitrust principles are the same. Antitrust analysis takes differences among these forms of intellectual property into account in evaluating the specific market circumstances in which transactions occur, just as it does with other particular market circumstances.

Intellectual property law bestows on the owners of intellectual property certain rights to exclude others. These rights help the owners to profit from the use of their property. An intellectual property owner's rights to exclude are similar to the rights enjoyed by owners of other forms of private property. As with other forms of private property, certain types of conduct with respect to intellectual property may have anticompetitive effects against which the antitrust laws can and do protect. Intellectual property is thus neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them.

The Agencies recognize that the licensing of intellectual property is often international. The principles of antitrust analysis described in these Guidelines apply equally to domestic and international licensing arrangements. However, as described in the 1995 Department of Justice and Federal Trade Commission Antitrust Enforcement Guidelines for International Operations, considerations particular to international operations, such as jurisdiction and comity, may affect enforcement decisions when the arrangement is in an international context.

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[8] As with other forms of property, the power to exclude others from the use of intellectual property may vary substantially, depending on the nature of the property and its status under federal or state law. The greater or lesser legal power of an owner to exclude others is also taken into account by standard antitrust analysis.

2.2 Intellectual property and market power

Market power is the ability profitably to maintain prices above, or output below, competitive levels for a significant period of time.[9] The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner. Although the intellectual property right confers the power to exclude with respect to the *specific* product, process, or work in question, there will often be sufficient actual or potential close substitutes for such product, process, or work to prevent the exercise of market power.[10] If a patent or other form of intellectual property does confer market power, that market power does not by itself offend the antitrust laws. As with any other tangible or intangible asset that enables its owner to obtain significant supracompetitive profits, market power (or even a monopoly) that is solely "a consequence of a superior product, business acumen, or historic accident" does not violate the antitrust laws.[11] Nor does such market power impose on the intellectual property owner an obligation to license the use of that property to others. As in other antitrust contexts, however, market power could be illegally acquired or maintained, or, even if lawfully acquired and maintained, would be relevant to the ability of an intellectual property owner to harm competition through unreasonable conduct in connection with such property.

2.3 Procompetitive benefits of licensing

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[9] Market power can be exercised in other economic dimensions, such as quality, service, and the development of new or improved goods and processes. It is assumed in this definition that all competitive dimensions are held constant except the ones in which market power is being exercised; that a seller is able to charge higher prices for a higher-quality product does not alone indicate market power. The definition in the text is stated in terms of a seller with market power. A buyer could also exercise market power (e.g., by maintaining the price below the competitive level, thereby depressing output).

[10] The Agencies note that the law is unclear on this issue. *Compare Jefferson Parish Hospital District No. 2 v. Hyde*, 466 U.S. 2, 16 (1984) (expressing the view in dictum that if a product is protected by a patent, "it is fair to presume that the inability to buy the product elsewhere gives the seller market power") *with id.* at 37 n.7 (O'Connor, J., concurring) ("[A] patent holder has no market power in any relevant sense if there are close substitutes for the patented product."). *Compare also Abbott Laboratories v. Brennan*, 952 F.2d 1346, 1354–55 (Fed. Cir. 1991) (no presumption of market power from intellectual property right), *cert. denied*, 112 S. Ct. 2993 (1992) *with Digidyne Corp. v. Data General Corp.*, 734 F.2d 1336, 1341–42 (9th Cir. 1984) (requisite economic power is presumed from copyright), *cert. denied*, 473 U.S. 908 (1985).

[11] *United States v. Grinnell Corp.*, 384 U.S. 563, 571 (1966); *see also United States v. Aluminum Co. of America*, 148 F.2d 416, 430 (2d Cir. 1945) (Sherman Act is not violated by the attainment of market power solely through "superior skill, foresight and industry").

Intellectual property typically is one component among many in a production process and derives value from its combination with complementary factors. Complementary factors of production include manufacturing and distribution facilities, workforces, and other items of intellectual property. The owner of intellectual property has to arrange for its combination with other necessary factors to realize its commercial value. Often, the owner finds it most efficient to contract with others for these factors, to sell rights to the intellectual property, or to enter into a joint venture arrangement for its development, rather than supplying these complementary factors itself.

Licensing, cross-licensing, or otherwise transferring intellectual property (hereinafter "licensing") can facilitate integration of the licensed property with complementary factors of production. This integration can lead to more efficient exploitation of the intellectual property, benefiting consumers through the reduction of costs and the introduction of new products. Such arrangements increase the value of intellectual property to consumers and to the developers of the technology. By potentially increasing the expected returns from intellectual property, licensing also can increase the incentive for its creation and thus promote greater investment in research and development.

Sometimes the use of one item of intellectual property requires access to another. An item of intellectual property "blocks" another when the second cannot be practiced without using the first. For example, an improvement on a patented machine can be blocked by the patent on the machine. Licensing may promote the coordinated development of technologies that are in a blocking relationship.

Field-of-use, territorial, and other limitations on intellectual property licenses may serve procompetitive ends by allowing the licensor to exploit its property as efficiently and effectively as possible. These various forms of exclusivity can be used to give a licensee an incentive to invest in the commercialization and distribution of products embodying the licensed intellectual property and to develop additional applications for the licensed property. The restrictions may do so, for example, by protecting the licensee against free-riding on the licensee's investments by other licensees or by the licensor. They may also increase the licensor's incentive to license, for example, by protecting the licensor from competition in the licensor's own technology in a market niche that it prefers to keep to itself. These benefits of licensing restrictions apply to patent, copyright, and trade secret licenses, and to know-how agreements.

Example 1[12]

Situation: ComputerCo develops a new, copyrighted software program for inventory management. The program has wide application in the health field. ComputerCo licenses the program in an arrangement that imposes both field of use and territorial limitations. Some of ComputerCo's licenses permit use only in hospitals; others permit use only in group medical practices. ComputerCo charges different royalties for the different uses. All of ComputerCo's licenses permit use only in specified portions of the United States and in specified foreign countries.[13] The licenses contain no provisions that would prevent or discourage licensees from developing, using, or selling any other program, or from competing in any other good or service other than in the use of the licensed program. None of the licensees are actual or likely potential competitors of ComputerCo in the sale of inventory management programs.

Discussion: The key competitive issue raised by the licensing arrangement is whether it harms competition among entities that would have been actual or likely potential competitors in the absence of the arrangement. Such harm could occur if, for example, the licenses anticompetitively foreclose access to competing technologies (in this case, most likely competing computer programs), prevent licensees from developing their own competing technologies (again, in this case, most likely computer programs), or facilitate market allocation or price-fixing for any product or service supplied by the licensees. (*See* section 3.1.) If the license agreements contained such provisions, the Agency evaluating the arrangement would analyze its likely competitive effects as described in parts 3–5 of these Guidelines. In this hypothetical, there are no such provisions and thus the arrangement is merely a subdivision of the licensor's intellectual property among different fields of use and territories. The licensing arrangement does not appear likely to harm competition among entities that would have been actual or likely potential competitors if ComputerCo had chosen not to license the software program. The Agency therefore would be unlikely to object to this arrangement. Based on these facts, the result of the antitrust analysis would be the same whether the technology was protected by patent, copyright, or trade secret. The Agency's conclusion as to likely competitive effects could differ if, for example, the license barred licensees from using any other inventory management program.

[12] The examples in these Guidelines are hypothetical and do not represent judgments about, or analysis of, any actual market circumstances of the named industries.

[13] These Guidelines do not address the possible application of the antitrust laws of other countries to restraints such as territorial restrictions in international licensing arrangements.

3. Antitrust concerns and modes of analysis

3.1 Nature of the concerns

While intellectual property licensing arrangements are typically welfare-enhancing and procompetitive, antitrust concerns may nonetheless arise. For example, a licensing arrangement could include restraints that adversely affect competition in goods markets by dividing the markets among firms that would have competed using different technologies. *See, e.g.*, Example 7. An arrangement that effectively merges the research and development activities of two of only a few entities that could plausibly engage in research and development in the relevant field might harm competition for development of new goods and services. *See* section 3.2.3. An acquisition of intellectual property may lessen competition in a relevant antitrust market. *See* section 5.7. The Agencies will focus on the actual effects of an arrangement, not on its formal terms.

The Agencies will not require the owner of intellectual property to create competition in its own technology. However, antitrust concerns may arise when a licensing arrangement harms competition among entities that would have been actual or likely potential competitors[14] in a relevant market in the absence of the license (entities in a "horizontal relationship"). A restraint in a licensing arrangement may harm such competition, for example, if it facilitates market division or price-fixing. In addition, license restrictions with respect to one market may harm such competition in another market by anticompetitively foreclosing access to, or significantly raising the price of, an important input,[15] or by facilitating coordination to increase price or reduce output. When it appears that such competition may be adversely affected, the Agencies will follow the analysis set forth below. *See generally* sections 3.4 and 4.2.

3.2 Markets affected by licensing arrangements

Licensing arrangements raise concerns under the antitrust laws if they are likely to affect adversely the prices, quantities, qualities, or varieties of goods and services[16] either currently or potentially available. The competitive effects of licensing arrangements often can be

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[14] A firm will be treated as a likely potential competitor if there is evidence that entry by that firm is reasonably probable in the absence of the licensing arrangement.

[15] As used herein, "input" includes outlets for distribution and sales, as well as factors of production. *See, e.g.*, sections 4.1.1 and 5.3–5.5 for further discussion of conditions under which foreclosing access to, or raising the price of, an input may harm competition in a relevant market.

[16] Hereinafter, the term "goods" also includes services.

adequately assessed within the relevant markets for the goods affected by the arrangements. In such instances, the Agencies will delineate and analyze only goods markets. In other cases, however, the analysis may require the delineation of markets for technology or markets for research and development (innovation markets).

3.2.1 Goods markets

A number of different goods markets may be relevant to evaluating the effects of a licensing arrangement. A restraint in a licensing arrangement may have competitive effects in markets for final or intermediate goods made using the intellectual property, or it may have effects upstream, in markets for goods that are used as inputs, along with the intellectual property, to the production of other goods. In general, for goods markets affected by a licensing arrangement, the Agencies will approach the delineation of relevant market and the measurement of market share in the intellectual property area as in section 1 of the U.S. Department of Justice and Federal Trade Commission Horizontal Merger Guidelines.[17]

3.2.2 Technology markets

Technology markets consist of the intellectual property that is licensed (the "licensed technology") and its close substitutes—that is, the technologies or goods that are close enough substitutes significantly to constrain the exercise of market power with respect to the intellectual property that is licensed.[18] When rights to intellectual property are marketed separately from the products in which they are used,[19] the Agencies may rely on technology markets to analyze the competitive effects of a licensing arrangement.

Example 2

Situation: Firms Alpha and Beta independently develop different patented process technologies

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[17] U.S. Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines (April 2, 1992) (hereinafter "1992 Horizontal Merger Guidelines"). As stated in section 1.41 of the 1992 Horizontal Merger Guidelines, market shares for goods markets "can be expressed either in dollar terms through measurement of sales, shipments, or production, or in physical terms through measurement of sales, shipments, production, capacity or reserves."

[18] For example, the owner of a process for producing a particular good may be constrained in its conduct with respect to that process not only by other processes for making that good, but also by other goods that compete with the downstream good and by the processes used to produce those other goods.

[19] Intellectual property is often licensed, sold, or transferred as an integral part of a marketed good. An example is a patented product marketed with an implied license permitting its use. In such circumstances, there is no need for a separate analysis of technology markets to capture relevant competitive effects.

to manufacture the same off-patent drug for the treatment of a particular disease. Before the firms use their technologies internally or license them to third parties, they announce plans jointly to manufacture the drug, and to assign their manufacturing processes to the new manufacturing venture. Many firms are capable of using and have the incentive to use the licensed technologies to manufacture and distribute the drug; thus, the market for drug manufacturing and distribution is competitive. One of the Agencies is evaluating the likely competitive effects of the planned venture.

Discussion: The Agency would analyze the competitive effects of the proposed joint venture by first defining the relevant markets in which competition may be affected and then evaluating the likely competitive effects of the joint venture in the identified markets. (*See* Example 4 for a discussion of the Agencies' approach to joint venture analysis.) In this example, the structural effect of the joint venture in the relevant goods market for the manufacture and distribution of the drug is unlikely to be significant, because many firms in addition to the joint venture compete in that market. The joint venture might, however, increase the prices of the drug produced using Alpha's or Beta's technology by reducing competition in the relevant market for technology to manufacture the drug.

The Agency would delineate a technology market in which to evaluate likely competitive effects of the proposed joint venture. The Agency would identify other technologies that can be used to make the drug with levels of effectiveness and cost per dose comparable to that of the technologies owned by Alpha and Beta. In addition, the Agency would consider the extent to which competition from other drugs that are substitutes for the drug produced using Alpha's or Beta's technology would limit the ability of a hypothetical monopolist that owned both Alpha's and Beta's technology to raise its price.

To identify a technology's close substitutes and thus to delineate the relevant technology market, the Agencies will, if the data permit, identify the smallest group of technologies and goods over which a hypothetical monopolist of those technologies and goods likely would exercise market power—for example, by imposing a small but significant and nontransitory price increase.[20] The Agencies recognize that technology often is licensed in ways that are not readily quantifiable in monetary terms.[21] In such

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[20] This is conceptually analogous to the analytical approach to goods markets under the 1992 Horizontal Merger Guidelines. *Cf.* § 1.11. Of course, market power also can be exercised in other dimensions, such as quality, and these dimensions also may be relevant to the definition and analysis of technology markets.

[21] For example, technology may be licensed royalty-free in exchange for the right to use other technology, or it may be licensed as part of a package license.

circumstances, the Agencies will delineate the relevant market by identifying other technologies and goods which buyers would substitute at a cost comparable to that of using the licensed technology.

In assessing the competitive significance of current and likely potential participants in a technology market, the Agencies will take into account all relevant evidence. When market share data are available and accurately reflect the competitive significance of market participants, the Agencies will include market share data in this assessment. The Agencies also will seek evidence of buyers' and market participants' assessments of the competitive significance of technology market participants. Such evidence is particularly important when market share data are unavailable, or do not accurately represent the competitive significance of market participants. When market share data or other indicia of market power are not available, and it appears that competing technologies are comparably efficient,[22] the Agencies will assign each technology the same market share. For new technologies, the Agencies generally will use the best available information to estimate market acceptance over a two-year period, beginning with commercial introduction.

3.2.3 Research and development: innovation markets

If a licensing arrangement may adversely affect competition to develop new or improved goods or processes, the Agencies will analyze such an impact either as a separate competitive effect in relevant goods or technology markets, or as a competitive effect in a separate innovation market. A licensing arrangement may have competitive effects on innovation that cannot be adequately addressed through the analysis of goods or technology markets. For example, the arrangement may affect the development of goods that do not yet exist.[23] Alternatively, the arrangement may affect the development of new or improved

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[22] The Agencies will regard two technologies as "comparably efficient" if they can be used to produce close substitutes at comparable costs.

[23] *E.g.*, *Sensormatic*, FTC Inv. No. 941-0126, 60 Fed. Reg. 5428 (accepted for comment Dec. 28, 1994); *Wright Medical Technology, Inc.*, FTC Inv. No. 951-0015, 60 Fed. Reg. 460 (accepted for comment Dec. 8, 1994); *American Home Products*, FTC Inv. No. 941-0116, 59 Fed. Reg. 60,807 (accepted for comment Nov. 28, 1994); *Roche Holdings Ltd.*, 113 F.T.C. 1086 (1990); *United States v. Automobile Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal. 1969), *appeal dismissed sub nom. City of New York v. United States,* 397 U.S. 248 (1970), *modified sub nom. United States v. Motor Vehicles Mfrs. Ass'n*, 1982–83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982).

goods or processes in geographic markets where there is no actual or likely potential competition in the relevant goods.[24]

An innovation market consists of the research and development directed to particular new or improved goods or processes, and the close substitutes for that research and development. The close substitutes are research and development efforts, technologies, and goods[25] that significantly constrain the exercise of market power with respect to the relevant research and development, for example by limiting the ability and incentive of a hypothetical monopolist to retard the pace of research and development. The Agencies will delineate an innovation market only when the capabilities to engage in the relevant research and development can be associated with specialized assets or characteristics of specific firms.

In assessing the competitive significance of current and likely potential participants in an innovation market, the Agencies will take into account all relevant evidence. When market share data are available and accurately reflect the competitive significance of market participants, the Agencies will include market share data in this assessment. The Agencies also will seek evidence of buyers' and market participants' assessments of the competitive significance of innovation market participants. Such evidence is particularly important when market share data are unavailable or do not accurately represent the competitive significance of market participants. The Agencies may base the market shares of participants in an innovation market on their shares of identifiable assets or characteristics upon which innovation depends, on shares of research and development expenditures, or on shares of a related product. When entities have comparable capabilities and incentives to pursue research and development that is a close substitute for the research and development activities of the parties to a licensing arrangement, the Agencies may assign equal market shares to such entities.

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[24] *See* Complaint, *United States v. General Motors Corp.*, Civ. No. 93-530 (D. Del., filed Nov. 16, 1993).

[25] For example, the licensor of research and development may be constrained in its conduct not only by competing research and development efforts but also by other existing goods that would compete with the goods under development.

Example 3

Situation: Two companies that specialize in advanced metallurgy agree to cross-license future patents relating to the development of a new component for aircraft jet turbines. Innovation in the development of the component requires the capability to work with very high tensile strength materials for jet turbines. Aspects of the licensing arrangement raise the possibility that competition in research and development of this and related components will be lessened. One of the Agencies is considering whether to define an innovation market in which to evaluate the competitive effects of the arrangement.

Discussion: If the firms that have the capability and incentive to work with very high tensile strength materials for jet turbines can be reasonably identified, the Agency will consider defining a relevant innovation market for development of the new component. If the number of firms with the required capability and incentive to engage in research and development of very high tensile strength materials for aircraft jet turbines is small, the Agency may employ the concept of an innovation market to analyze the likely competitive effects of the arrangement in that market, or as an aid in analyzing competitive effects in technology or goods markets. The Agency would perform its analysis as described in parts 3–5.

If the number of firms with the required capability and incentive is large (either because there are a large number of such firms in the jet turbine industry, or because there are many firms in other industries with the required capability and incentive), then the Agency will conclude that the innovation market is competitive. Under these circumstances, it is unlikely that any single firm or plausible aggregation of firms could acquire a large enough share of the assets necessary for innovation to have an adverse impact on competition.

If the Agency cannot reasonably identify the firms with the required capability and incentive, it will not attempt to define an innovation market.

Example 4

Situation: Three of the largest producers of a plastic used in disposable bottles plan to engage in joint research and development to produce a new type of plastic that is rapidly biodegradable. The joint venture will grant to its partners (but to no one else) licenses to all patent rights and use of know-how. One of the Agencies is evaluating the likely competitive effects of the proposed joint venture.

Discussion: The Agency would analyze the proposed research and development joint venture using an analysis similar to that applied to other joint ventures.[26] The Agency would begin by defining the relevant markets in which to analyze the joint venture's likely competitive effects.

[26] *See, e.g.*, U.S. Department of Justice and Federal Trade Commission, Statements of Enforcement Policy and Analytical Principles Relating to Health Care and Antitrust 20–23, 37–40, 72–74 (September 27, 1994). This type of transaction may qualify for treatment under the National Cooperative Research and Production Act of 1993, 15 U.S.C.A §§ 4301–05.

In this case, a relevant market is an innovation market—research and development for biodegradable (and other environmentally friendly) containers. The Agency would seek to identify any other entities that would be actual or likely potential competitors with the joint venture in that relevant market. This would include those firms that have the capability and incentive to undertake research and development closely substitutable for the research and development proposed to be undertaken by the joint venture, taking into account such firms' existing technologies and technologies under development, R&D facilities, and other relevant assets and business circumstances. Firms possessing such capabilities and incentives would be included in the research and development market even if they are not competitors in relevant markets for related goods, such as the plastics currently produced by the joint venturers, although competitors in existing goods markets may often also compete in related innovation markets.

Having defined a relevant innovation market, the Agency would assess whether the joint venture is likely to have anticompetitive effects in that market. A starting point in this analysis is the degree of concentration in the relevant market and the market shares of the parties to the joint venture. If, in addition to the parties to the joint venture (taken collectively), there are at least four other independently controlled entities that possess comparable capabilities and incentives to undertake research and development of biodegradable plastics, or other products that would be close substitutes for such new plastics, the joint venture ordinarily would be unlikely to adversely affect competition in the relevant innovation market (*cf.* section 4.3). If there are fewer than four other independently controlled entities with similar capabilities and incentives, the Agency would consider whether the joint venture would give the parties to the joint venture an incentive and ability collectively to reduce investment in, or otherwise to retard the pace or scope of, research and development efforts. If the joint venture creates a significant risk of anticompetitive effects in the innovation market, the Agency would proceed to consider efficiency justifications for the venture, such as the potential for combining complementary R&D assets in such a way as to make successful innovation more likely, or to bring it about sooner, or to achieve cost reductions in research and development.

The Agency would also assess the likelihood that the joint venture would adversely affect competition in other relevant markets, including markets for products produced by the parties to the joint venture. The risk of such adverse competitive effects would be increased to the extent that, for example, the joint venture facilitates the exchange among the parties of competitively sensitive information relating to goods markets in which the parties currently compete or facilitates the coordination of competitive activities in such markets. The Agency would examine whether the joint venture imposes collateral restraints that might significantly restrict competition among the joint venturers in goods markets, and would examine whether such collateral restraints were reasonably necessary to achieve any efficiencies that are likely to be attained by the venture.

3.3 Horizontal and vertical relationships

As with other property transfers, antitrust analysis of intellectual property licensing arrangements examines whether the relationship among the parties to the arrangement is primarily horizontal or vertical in nature, or whether it has substantial aspects of both. A licensing arrangement has a vertical component when it affects activities that are in a complementary relationship, as is typically the case in a licensing arrangement. For example, the licensor's primary line of business may be in research and development, and the licensees, as manufacturers, may be buying the rights to use technology developed by the licensor. Alternatively, the licensor may be a component manufacturer owning intellectual property rights in a product that the licensee manufactures by combining the component with other inputs, or the licensor may manufacture the product, and the licensees may operate primarily in distribution and marketing.

In addition to this vertical component, the licensor and its licensees may also have a horizontal relationship. For analytical purposes, the Agencies ordinarily will treat a relationship between a licensor and its licensees, or between licensees, as horizontal when they would have been actual or likely potential competitors in a relevant market in the absence of the license.

The existence of a horizontal relationship between a licensor and its licensees does not, in itself, indicate that the arrangement is anticompetitive. Identification of such relationships is merely an aid in determining whether there may be anticompetitive effects arising from a licensing arrangement. Such a relationship need not give rise to an anticompetitive effect, nor does a purely vertical relationship assure that there are no anticompetitive effects.

The following examples illustrate different competitive relationships among a licensor and its licensees.

Example 5

Situation: AgCo, a manufacturer of farm equipment, develops a new, patented emission control technology for its tractor engines and licenses it to FarmCo, another farm equipment manufacturer. AgCo's emission control technology is far superior to the technology currently owned and used by FarmCo, so much so that FarmCo's technology does not significantly constrain the prices that AgCo could charge for its technology. AgCo's emission control patent has a broad scope. It is likely that any improved emissions control technology that FarmCo could develop in the foreseeable future would infringe AgCo's patent.

Discussion: Because FarmCo's emission control technology does not significantly constrain AgCo's competitive conduct with respect to its emission control technology, AgCo's and FarmCo's emission control technologies are not close substitutes for each other. FarmCo is a consumer of AgCo's technology and is not an actual competitor of AgCo in the relevant market for superior emission control technology of the kind licensed by AgCo. Furthermore, FarmCo

is not a likely potential competitor of AgCo in the relevant market because, even if FarmCo could develop an improved emission control technology, it is likely that it would infringe AgCo's patent. This means that the relationship between AgCo and FarmCo with regard to the supply and use of emissions control technology is vertical. Assuming that AgCo and FarmCo are actual or likely potential competitors in sales of farm equipment products, their relationship is horizontal in the relevant markets for farm equipment.

Example 6

Situation: FarmCo develops a new valve technology for its engines and enters into a cross-licensing arrangement with AgCo, whereby AgCo licenses its emission control technology to FarmCo and FarmCo licenses its valve technology to AgCo. AgCo already owns an alternative valve technology that can be used to achieve engine performance similar to that using FarmCo's valve technology and at a comparable cost to consumers. Before adopting FarmCo's technology, AgCo was using its own valve technology in its production of engines and was licensing (and continues to license) that technology for use by others. As in Example 5, FarmCo does not own or control an emission control technology that is a close substitute for the technology licensed from AgCo. Furthermore, as in Example 5, FarmCo is not likely to develop an improved emission control technology that would be a close substitute for AgCo's technology, because of AgCo's blocking patent.

Discussion: FarmCo is a consumer and not a competitor of AgCo's emission control technology. As in Example 5, their relationship is vertical with regard to this technology. The relationship between AgCo and FarmCo in the relevant market that includes engine valve technology is vertical in part and horizontal in part. It is vertical in part because AgCo and FarmCo stand in a complementary relationship, in which AgCo is a consumer of a technology supplied by FarmCo. However, the relationship between AgCo and FarmCo in the relevant market that includes engine valve technology is also horizontal in part, because FarmCo and AgCo are actual competitors in the licensing of valve technology that can be used to achieve similar engine performance at a comparable cost. Whether the firms license their valve technologies to others is not important for the conclusion that the firms have a horizontal relationship in this relevant market. Even if AgCo's use of its valve technology were solely captive to its own production, the fact that the two valve technologies are substitutable at comparable cost means that the two firms have a horizontal relationship.

As in Example 5, the relationship between AgCo and FarmCo is horizontal in the relevant markets for farm equipment.

3.4 Framework for evaluating licensing restraints

In the vast majority of cases, restraints in intellectual property licensing arrangements are evaluated under the rule of reason. The Agencies' general approach in analyzing a licensing restraint under the rule of reason is to inquire whether the restraint is likely to have anticompetitive effects and, if so, whether the restraint is reasonably necessary to achieve procompetitive benefits that outweigh those anticompetitive effects. *See Federal Trade Commission v. Indiana Federation of Dentists*, 476 U.S. 447 (1986); *NCAA v. Board of Regents of the University of Oklahoma,* 468 U.S. 85 (1984); *Broadcast Music, Inc. v. Columbia Broadcasting System, Inc.,* 441 U.S. 1 (1979); 7 Phillip E. Areeda, *Antitrust Law* § 1502 (1986). *See also* part 4.

In some cases, however, the courts conclude that a restraint's "nature and necessary effect are so plainly anticompetitive" that it should be treated as unlawful per se, without an elaborate inquiry into the restraint's likely competitive effect. *Federal Trade Commission v. Superior Court Trial Lawyers Association*, 493 U.S. 411, 433 (1990); *National Society of Professional Engineers v. United States*, 435 U.S. 679, 692 (1978). Among the restraints that have been held per se unlawful are naked price-fixing, output restraints, and market division among horizontal competitors, as well as certain group boycotts and resale price maintenance.

To determine whether a particular restraint in a licensing arrangement is given per se or rule of reason treatment, the Agencies will assess whether the restraint in question can be expected to contribute to an efficiency-enhancing integration of economic activity. *See Broadcast Music*, 441 U.S. at 16–24. In general, licensing arrangements promote such integration because they facilitate the combination of the licensor's intellectual property with complementary factors of production owned by the licensee. A restraint in a licensing arrangement may further such integration by, for example, aligning the incentives of the licensor and the licensees to promote the development and marketing of the licensed technology, or by substantially reducing transactions costs. If there is no efficiency-enhancing integration of economic activity and if the type of restraint is one that has been accorded per se treatment, the Agencies will challenge the restraint under the per se rule. Otherwise, the Agencies will apply a rule of reason analysis.

Application of the rule of reason generally requires a comprehensive inquiry into market conditions. (*See* sections 4.1–4.3.) However, that inquiry may be truncated in certain circumstances. If the Agencies conclude that a restraint has no likely anticompetitive effects, they will treat it as reasonable, without an elaborate analysis of market power or the justifications for the restraint. Similarly, if a restraint facially appears to be of a kind that

would always or almost always tend to reduce output or increase prices,[27] and the restraint is not reasonably related to efficiencies, the Agencies will likely challenge the restraint without an elaborate analysis of particular industry circumstances.[28] *See Indiana Federation of Dentists*, 476 U.S. at 459–60; *NCAA*, 468 U.S. at 109.

Example 7

Situation: Gamma, which manufactures Product X using its patented process, offers a license for its process technology to every other manufacturer of Product X, each of which competes world-wide with Gamma in the manufacture and sale of X. The process technology does not represent an economic improvement over the available existing technologies. Indeed, although most manufacturers accept licenses from Gamma, none of the licensees actually uses the licensed technology. The licenses provide that each manufacturer has an exclusive right to sell Product X manufactured using the licensed technology in a designated geographic area and that no manufacturer may sell Product X, however manufactured, outside the designated territory.

Discussion: The manufacturers of Product X are in a horizontal relationship in the goods market for Product X. Any manufacturers of Product X that control technologies that are substitutable at comparable cost for Gamma's process are also horizontal competitors of Gamma in the relevant technology market. The licensees of Gamma's process technology are technically in a vertical relationship, although that is not significant in this example because they do not actually use Gamma's technology.

The licensing arrangement restricts competition in the relevant goods market among manufacturers of Product X by requiring each manufacturer to limit its sales to an exclusive territory. Thus, competition among entities that would be actual competitors in the absence of the licensing arrangement is restricted. Based on the facts set forth above, the licensing arrangement does not involve a useful transfer of technology, and thus it is unlikely that the restraint on sales outside the designated territories contributes to an efficiency-enhancing integration of economic activity. Consequently, the evaluating Agency would be likely to challenge the arrangement under the per se rule as a horizontal territorial market allocation scheme and to view the intellectual property aspects of the arrangement as a sham intended to cloak its true nature.

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[27] Details about the Federal Trade Commission's approach are set forth in *Massachusetts Board of Registration in Optometry*, 110 F.T.C. 549, 604 (1988). In applying its truncated rule of reason inquiry, the FTC uses the analytical category of "inherently suspect" restraints to denote facially anticompetitive restraints that would always or almost always tend to decrease output or increase prices, but that may be relatively unfamiliar or may not fit neatly into traditional per se categories.

[28] Under the FTC's *Mass. Board* approach, asserted efficiency justifications for inherently suspect restraints are examined to determine whether they are plausible and, if so, whether they are valid in the context of the market at issue. *Mass. Board*, 110 F.T.C. at 604.

If the licensing arrangement could be expected to contribute to an efficiency-enhancing integration of economic activity, as might be the case if the licensed technology were an advance over existing processes and used by the licensees, the Agency would analyze the arrangement under the rule of reason applying the analytical framework described in this section.

In this example, the competitive implications do not generally depend on whether the licensed technology is protected by patent, is a trade secret or other know-how, or is a computer program protected by copyright; nor do the competitive implications generally depend on whether the allocation of markets is territorial, as in this example, or functional, based on fields of use.

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4. General principles concerning the Agencies' evaluation of licensing arrangements under the rule of reason

4.1 Analysis of anticompetitive effects

The existence of anticompetitive effects resulting from a restraint in a licensing arrangement will be evaluated on the basis of the analysis described in this section.

4.1.1 Market structure, coordination, and foreclosure

When a licensing arrangement affects parties in a horizontal relationship, a restraint in that arrangement may increase the risk of coordinated pricing, output restrictions, or the acquisition or maintenance of market power. Harm to competition also may occur if the arrangement poses a significant risk of retarding or restricting the development of new or improved goods or processes. The potential for competitive harm depends in part on the degree of concentration in, the difficulty of entry into, and the responsiveness of supply and demand to changes in price in the relevant markets. *Cf.* 1992 Horizontal Merger Guidelines §§ 1.5, 3.

When the licensor and licensees are in a vertical relationship, the Agencies will analyze whether the licensing arrangement may harm competition among entities in a horizontal relationship at either the level of the licensor or the licensees, or possibly in another relevant market. Harm to competition from a restraint may occur if it anticompetitively forecloses access to, or increases competitors' costs of obtaining, important inputs, or facilitates coordination to raise price or restrict output. The risk of anticompetitively foreclosing access or increasing competitors' costs is related to the proportion of the markets affected by the licensing restraint; other characteristics of the relevant markets, such as concentration,

difficulty of entry, and the responsiveness of supply and demand to changes in price in the relevant markets; and the duration of the restraint. A licensing arrangement does not foreclose competition merely because some or all of the potential licensees in an industry choose to use the licensed technology to the exclusion of other technologies. Exclusive use may be an efficient consequence of the licensed technology having the lowest cost or highest value.

Harm to competition from a restraint in a vertical licensing arrangement also may occur if a licensing restraint facilitates coordination among entities in a horizontal relationship to raise prices or reduce output in a relevant market. For example, if owners of competing technologies impose similar restraints on their licensees, the licensors may find it easier to coordinate their pricing. Similarly, licensees that are competitors may find it easier to coordinate their pricing if they are subject to common restraints in licenses with a common licensor or competing licensors. The risk of anticompetitive coordination is increased when the relevant markets are concentrated and difficult to enter. The use of similar restraints may be common and procompetitive in an industry, however, because they contribute to efficient exploitation of the licensed property.

4.1.2 Licensing arrangements involving exclusivity

A licensing arrangement may involve exclusivity in two distinct respects. First, the licensor may grant one or more *exclusive licenses*, which restrict the right of the licensor to license others and possibly also to use the technology itself. Generally, an exclusive license may raise antitrust concerns only if the licensees themselves, or the licensor and its licensees, are in a horizontal relationship. Examples of arrangements involving exclusive licensing that may give rise to antitrust concerns include cross-licensing by parties collectively possessing market power (*see* section 5.5), grantbacks (*see* section 5.6), and acquisitions of intellectual property rights (*see* section 5.7).

A non-exclusive license of intellectual property that does not contain any restraints on the competitive conduct of the licensor or the licensee generally does not present antitrust concerns even if the parties to the license are in a horizontal relationship, because the non-exclusive license normally does not diminish competition that would occur in its absence.

A second form of exclusivity, *exclusive dealing*, arises when a license prevents or restrains the licensee from licensing, selling, distributing, or using competing technologies. *See* section 5.4. Exclusivity may be achieved by an explicit exclusive dealing term in the license or by other provisions such as compensation terms or other economic incentives. Such restraints may anticompetitively foreclose access to, or increase competitors' costs of obtaining, important inputs, or facilitate coordination to raise price or reduce output, but they

also may have procompetitive effects. For example, a licensing arrangement that prevents the licensee from dealing in other technologies may encourage the licensee to develop and market the licensed technology or specialized applications of that technology. *See, e.g.*, Example 8. The Agencies will take into account such procompetitive effects in evaluating the reasonableness of the arrangement. *See* section 4.2.

The antitrust principles that apply to a licensor's grant of various forms of exclusivity to and among its licensees are similar to those that apply to comparable vertical restraints outside the licensing context, such as exclusive territories and exclusive dealing. However, the fact that intellectual property may in some cases be misappropriated more easily than other forms of property may justify the use of some restrictions that might be anticompetitive in other contexts.

As noted earlier, the Agencies will focus on the actual practice and its effects, not on the formal terms of the arrangement. A license denominated as non-exclusive (either in the sense of exclusive licensing or in the sense of exclusive dealing) may nonetheless give rise to the same concerns posed by formal exclusivity. A non-exclusive license may have the effect of exclusive licensing if it is structured so that the licensor is unlikely to license others or to practice the technology itself. A license that does not explicitly require exclusive dealing may have the effect of exclusive dealing if it is structured to increase significantly a licensee's cost when it uses competing technologies. However, a licensing arrangement will not automatically raise these concerns merely because a party chooses to deal with a single licensee or licensor, or confines his activity to a single field of use or location, or because only a single licensee has chosen to take a license.

Example 8

Situation: NewCo, the inventor and manufacturer of a new flat panel display technology, lacking the capability to bring a flat panel display product to market, grants BigCo an exclusive license to sell a product embodying NewCo's technology. BigCo does not currently sell, and is not developing (or likely to develop), a product that would compete with the product embodying the new technology and does not control rights to another display technology. Several firms offer competing displays, BigCo accounts for only a small proportion of the outlets for distribution of display products, and entry into the manufacture and distribution of display products is relatively easy. Demand for the new technology is uncertain and successful market penetration will require considerable promotional effort. The license contains an exclusive dealing restriction preventing BigCo from selling products that compete with the product embodying the licensed technology.

Discussion: This example illustrates both types of exclusivity in a licensing arrangement. The license is exclusive in that it restricts the right of the licensor to grant other licenses. In

addition, the license has an exclusive dealing component in that it restricts the licensee from selling competing products.

The inventor of the display technology and its licensee are in a vertical relationship and are not actual or likely potential competitors in the manufacture or sale of display products or in the sale or development of technology. Hence, the grant of an exclusive license does not affect competition between the licensor and the licensee. The exclusive license may promote competition in the manufacturing and sale of display products by encouraging BigCo to develop and promote the new product in the face of uncertain demand by rewarding BigCo for its efforts if they lead to large sales. Although the license bars the licensee from selling competing products, this exclusive dealing aspect is unlikely in this example to harm competition by anticompetitively foreclosing access, raising competitors' costs of inputs, or facilitating anticompetitive pricing because the relevant product market is unconcentrated, the exclusive dealing restraint affects only a small proportion of the outlets for distribution of display products, and entry is easy. On these facts, the evaluating Agency would be unlikely to challenge the arrangement.

4.2 Efficiencies and justifications

If the Agencies conclude, upon an evaluation of the market factors described in section 4.1, that a restraint in a licensing arrangement is unlikely to have an anticompetitive effect, they will not challenge the restraint. If the Agencies conclude that the restraint has, or is likely to have, an anticompetitive effect, they will consider whether the restraint is reasonably necessary to achieve procompetitive efficiencies. If the restraint is reasonably necessary, the Agencies will balance the procompetitive efficiencies and the anticompetitive effects to determine the probable net effect on competition in each relevant market.

The Agencies' comparison of anticompetitive harms and procompetitive efficiencies is necessarily a qualitative one. The risk of anticompetitive effects in a particular case may be insignificant compared to the expected efficiencies, or vice versa. As the expected anticompetitive effects in a particular licensing arrangement increase, the Agencies will require evidence establishing a greater level of expected efficiencies.

The existence of practical and significantly less restrictive alternatives is relevant to a determination of whether a restraint is reasonably necessary. If it is clear that the parties could have achieved similar efficiencies by means that are significantly less restrictive, then the Agencies will not give weight to the parties' efficiency claim. In making this assessment, however, the Agencies will not engage in a search for a theoretically least restrictive alternative that is not realistic in the practical prospective business situation faced by the parties.

When a restraint has, or is likely to have, an anticompetitive effect, the duration of that restraint can be an important factor in determining whether it is reasonably necessary to achieve the putative procompetitive efficiency. The effective duration of a restraint may depend on a number of factors, including the option of the affected party to terminate the arrangement unilaterally and the presence of contract terms (e.g., unpaid balances on minimum purchase commitments) that encourage the licensee to renew a license arrangement. Consistent with their approach to less restrictive alternative analysis generally, the Agencies will not attempt to draw fine distinctions regarding duration; rather, their focus will be on situations in which the duration clearly exceeds the period needed to achieve the procompetitive efficiency.

The evaluation of procompetitive efficiencies, of the reasonable necessity of a restraint to achieve them, and of the duration of the restraint, may depend on the market context. A restraint that may be justified by the needs of a new entrant, for example, may not have a procompetitive efficiency justification in different market circumstances. *Cf. United States v. Jerrold Electronics Corp.*, 187 F. Supp. 545 (E.D. Pa. 1960), *aff'd per curiam,* 365 U.S. 567 (1961).

4.3 Antitrust "safety zone"

Because licensing arrangements often promote innovation and enhance competition, the Agencies believe that an antitrust "safety zone" is useful in order to provide some degree of certainty and thus to encourage such activity.[29] Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement if (1) the restraint is not facially anticompetitive[30] and (2) the licensor and its licensees collectively account for no more than twenty percent of each relevant market significantly affected by the restraint. This "safety zone" does not apply to those transfers of intellectual property rights to which a merger analysis is applied. *See* section 5.7.

Whether a restraint falls within the safety zone will be determined by reference only to goods markets unless the analysis of goods markets alone would inadequately address the effects of the licensing arrangement on competition among technologies or in research and development.

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[29] The antitrust "safety zone" does not apply to restraints that are not in a licensing arrangement, or to restraints that are in a licensing arrangement but are unrelated to the use of the licensed intellectual property.

[30] "Facially anticompetitive" refers to restraints that normally warrant per se treatment, as well as other restraints of a kind that would always or almost always tend to reduce output or increase prices. *See* section 3.4.

If an examination of the effects on competition among technologies or in research development is required, and if market share data are unavailable or do not accurately represent competitive significance, the following safety zone criteria will apply. Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement that may affect competition in a technology market if (1) the restraint is not facially anticompetitive and (2) there are four or more independently controlled technologies in addition to the technologies controlled by the parties to the licensing arrangement that may be substitutable for the licensed technology at a comparable cost to the user. Absent extraordinary circumstances, the Agencies will not challenge a restraint in an intellectual property licensing arrangement that may affect competition in an innovation market if (1) the restraint is not facially anticompetitive and (2) four or more independently controlled entities in addition to the parties to the licensing arrangement possess the required specialized assets or characteristics and the incentive to engage in research and development that is a close substitute of the research and development activities of the parties to the licensing agreement.[31]

The Agencies emphasize that licensing arrangements are not anticompetitive merely because they do not fall within the scope of the safety zone. Indeed, it is likely that the great majority of licenses falling outside the safety zone are lawful and procompetitive. The safety zone is designed to provide owners of intellectual property with a degree of certainty in those situations in which anticompetitive effects are so unlikely that the arrangements may be presumed not to be anticompetitive without an inquiry into particular industry circumstances. It is not intended to suggest that parties should conform to the safety zone or to discourage parties falling outside the safety zone from adopting restrictions in their license arrangements that are reasonably necessary to achieve an efficiency-enhancing integration of economic activity. The Agencies will analyze arrangements falling outside the safety zone based on the considerations outlined in parts 3–5.

The status of a licensing arrangement with respect to the safety zone may change over time. A determination by the Agencies that a restraint in a licensing arrangement qualifies for inclusion in the safety zone is based on the factual circumstances prevailing at the time of the conduct at issue.[32]

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[31] This is consistent with congressional intent in enacting the National Cooperative Research Act. *See* H.R. Conf. Rpt. No. 1044, 98th Cong., 2d Sess., 10, *reprinted in* 1984 U.S.C.C.A.N. 3105, 3134–35.

[32] The conduct at issue may be the transaction giving rise to the restraint or the subsequent implementation of the restraint.

5. Application of general principles

5.0 This section illustrates the application of the general principles discussed above to particular licensing restraints and to arrangements that involve the cross-licensing, pooling, or acquisition of intellectual property. The restraints and arrangements identified are typical of those that are likely to receive antitrust scrutiny; however, they are not intended as an exhaustive list of practices that could raise competitive concerns.

5.1 Horizontal restraints

The existence of a restraint in a licensing arrangement that affects parties in a horizontal relationship (a "horizontal restraint") does not necessarily cause the arrangement to be anticompetitive. As in the case of joint ventures among horizontal competitors, licensing arrangements among such competitors may promote rather than hinder competition if they result in integrative efficiencies. Such efficiencies may arise, for example, from the realization of economies of scale and the integration of complementary research and development, production, and marketing capabilities.

Following the general principles outlined in section 3.4, horizontal restraints often will be evaluated under the rule of reason. In some circumstances, however, that analysis may be truncated; additionally, some restraints may merit per se treatment, including price fixing, allocation of markets or customers, agreements to reduce output, and certain group boycotts.

Example 9

Situation: Two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. The manufacturers assign their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties. None of the patents is blocking; that is, each of the patents can be used without infringing a patent owned by the other firm. The different circuit designs are substitutable in that each permits the manufacture at comparable cost to consumers of products that consumers consider to be interchangeable. One of the Agencies is analyzing the licensing arrangement.

Discussion: In this example, the manufacturers are horizontal competitors in the goods market for the consumer product and in the related technology markets. The competitive issue with regard to a joint assignment of patent rights is whether the assignment has an adverse impact on competition in technology and goods markets that is not outweighed by procompetitive efficiencies, such as benefits in the use or dissemination of the technology. Each of the patent owners has a right to exclude others from using its patent. That right does not extend, however, to the agreement to assign rights jointly. To the extent that the patent rights cover technologies that are close substitutes, the joint determination of royalties likely would result in higher royalties and higher goods prices than would result if the owners licensed or used their technologies independently. In the absence of evidence establishing efficiency-enhancing integration from the joint assignment of patent rights, the Agency may conclude that the joint marketing of competing patent rights constitutes horizontal price fixing and could be challenged as a per se unlawful horizontal restraint of trade. If the joint marketing arrangement results in an efficiency-enhancing integration, the Agency would evaluate the arrangement under the rule of reason. However, the Agency may conclude that the anticompetitive effects are sufficiently apparent, and the claimed integrative efficiencies are sufficiently weak or not reasonably related to the restraints, to warrant challenge of the arrangement without an elaborate analysis of particular industry circumstances (*see* section 3.4).

5.2 Resale price maintenance

Resale price maintenance is illegal when "commodities have passed into the channels of trade and are owned by dealers." *Dr. Miles Medical Co. v. John D. Park & Sons Co.*, 220 U.S. 373, 408 (1911). It has been held per se illegal for a licensor of an intellectual property right in a product to fix a licensee's *resale* price of that product. *United States v. Univis Lens Co.*, 316 U.S. 241 (1942); *Ethyl Gasoline Corp. v. United States*, 309 U.S. 436 (1940).[33]

[33] *But cf. United States v. General Electric Co.*, 272 U.S. 476 (1926) (holding that an owner of a product patent may condition a license to manufacture the product on the fixing of the *first* sale price

Consistent with the principles set forth in section 3.4, the Agencies will enforce the per se rule against resale price maintenance in the intellectual property context.

5.3 Tying arrangements

A "tying" or "tie-in" or "tied sale" arrangement has been defined as "an agreement by a party to sell one product . . . on the condition that the buyer also purchases a different (or tied) product, or at least agrees that he will not purchase that [tied] product from any other supplier." *Eastman Kodak Co. v. Image Technical Services, Inc.*, 112 S. Ct. 2072, 2079 (1992). Conditioning the ability of a licensee to license one or more items of intellectual property on the licensee's purchase of another item of intellectual property or a good or a service has been held in some cases to constitute illegal tying.[34] Although tying arrangements may result in anticompetitive effects, such arrangements can also result in significant efficiencies and procompetitive benefits. In the exercise of their prosecutorial discretion, the Agencies will consider both the anticompetitive effects and the efficiencies attributable to a tie-in. The Agencies would be likely to challenge a tying arrangement if: (1) the seller has market power in the tying product,[35] (2) the arrangement has an adverse effect on competition in the relevant market for the tied product, and (3) efficiency justifications for the arrangement do not outweigh the anticompetitive effects.[36] The Agencies will not presume that a patent, copyright, or trade secret necessarily confers market power upon its owner.

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of the patented product). Subsequent lower court decisions have distinguished the *GE* decision in various contexts. *See, e.g., Royal Indus. v. St. Regis Paper Co.*, 420 F.2d 449, 452 (9th Cir. 1969) (observing that *GE* involved a restriction by a patentee who also manufactured the patented product and leaving open the question whether a nonmanufacturing patentee may fix the price of the patented product); *Newburgh Moire Co. v. Superior Moire Co.*, 237 F.2d 283, 293–94 (3rd Cir. 1956) (grant of multiple licenses each containing price restrictions does not come within the *GE* doctrine); *Cummer-Graham Co. v. Straight Side Basket Corp.*, 142 F.2d 646, 647 (5th Cir.) (owner of an intellectual property right in a process to manufacture an unpatented product may not fix the sale price of that product), *cert. denied*, 323 U.S. 726 (1944); *Barber-Colman Co. v. National Tool Co.*, 136 F.2d 339, 343–44 (6th Cir. 1943) (same).

[34] *See, e.g., United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 156–58 (1948) (copyrights); *International Salt Co. v. United States*, 332 U.S. 392 (1947) (patent and related product).

[35] *Cf.* 35 U.S.C. § 271(d) (1988 & Supp. V 1993) (requirement of market power in patent misuse cases involving tying).

[36] As is true throughout these Guidelines, the factors listed are those that guide the Agencies' internal analysis in exercising their prosecutorial discretion. They are not intended to circumscribe how the Agencies will conduct the litigation of cases that they decide to bring.

Package licensing—the licensing of multiple items of intellectual property in a single license or in a group of related licenses—may be a form of tying arrangement if the licensing of one product is conditioned upon the acceptance of a license of another, separate product. Package licensing can be efficiency enhancing under some circumstances. When multiple licenses are needed to use any single item of intellectual property, for example, a package license may promote such efficiencies. If a package license constitutes a tying arrangement, the Agencies will evaluate its competitive effects under the same principles they apply to other tying arrangements.

5.4 Exclusive dealing

In the intellectual property context, exclusive dealing occurs when a license prevents the licensee from licensing, selling, distributing, or using competing technologies. Exclusive dealing arrangements are evaluated under the rule of reason. *See Tampa Electric Co. v. Nashville Coal Co.*, 365 U.S. 320 (1961) (evaluating legality of exclusive dealing under section 1 of the Sherman Act and section 3 of the Clayton Act); *Beltone Electronics Corp.*, 100 F.T.C. 68 (1982) (evaluating legality of exclusive dealing under section 5 of the Federal Trade Commission Act). In determining whether an exclusive dealing arrangement is likely to reduce competition in a relevant market, the Agencies will take into account the extent to which the arrangement (1) promotes the exploitation and development of the licensor's technology and (2) anticompetitively forecloses the exploitation and development of, or otherwise constrains competition among, competing technologies.

The likelihood that exclusive dealing may have anticompetitive effects is related, inter alia, to the degree of foreclosure in the relevant market, the duration of the exclusive dealing arrangement, and other characteristics of the input and output markets, such as concentration, difficulty of entry, and the responsiveness of supply and demand to changes in price in the relevant markets. (*See* sections 4.1.1 and 4.1.2.) If the Agencies determine that a particular exclusive dealing arrangement may have an anticompetitive effect, they will evaluate the extent to which the restraint encourages licensees to develop and market the licensed technology (or specialized applications of that technology), increases licensors' incentives to develop or refine the licensed technology, or otherwise increases competition and enhances output in a relevant market. (*See* section 4.2 and Example 8.)

5.5 Cross-licensing and pooling arrangements

Cross-licensing and pooling arrangements are agreements of two or more owners of different items of intellectual property to license one another or third parties. These arrangements may provide procompetitive benefits by integrating complementary technologies, reducing transaction costs, clearing blocking positions, and avoiding costly infringement litigation. By promoting the dissemination of technology, cross-licensing and pooling arrangements are often procompetitive.

Cross-licensing and pooling arrangements can have anticompetitive effects in certain circumstances. For example, collective price or output restraints in pooling arrangements, such as the joint marketing of pooled intellectual property rights with collective price setting or coordinated output restrictions, may be deemed unlawful if they do not contribute to an efficiency-enhancing integration of economic activity among the participants. *Compare NCAA* 468 U.S. at 114 (output restriction on college football broadcasting held unlawful because it was not reasonably related to any purported justification) *with Broadcast Music*, 441 U.S. at 23 (blanket license for music copyrights found not per se illegal because the cooperative price was necessary to the creation of a new product). When cross-licensing or pooling arrangements are mechanisms to accomplish naked price fixing or market division, they are subject to challenge under the per se rule. *See United States v. New Wrinkle, Inc.*, 342 U.S. 371 (1952) (price fixing).

Settlements involving the cross-licensing of intellectual property rights can be an efficient means to avoid litigation and, in general, courts favor such settlements. When such cross-licensing involves horizontal competitors, however, the Agencies will consider whether the effect of the settlement is to diminish competition among entities that would have been actual or likely potential competitors in a relevant market in the absence of the cross-license. In the absence of offsetting efficiencies, such settlements may be challenged as unlawful restraints of trade. *Cf. United States v. Singer Manufacturing Co.*, 374 U.S. 174 (1963) (cross-license agreement was part of broader combination to exclude competitors).

Pooling arrangements generally need not be open to all who would like to join. However, exclusion from cross-licensing and pooling arrangements among parties that collectively possess market power may, under some circumstances, harm competition. *Cf. Northwest Wholesale Stationers, Inc. v. Pacific Stationery & Printing Co.*, 472 U.S. 284 (1985) (exclusion of a competitor from a purchasing cooperative not per se unlawful absent a showing of market power). In general, exclusion from a pooling or cross-licensing arrangement among competing technologies is unlikely to have anticompetitive effects unless (1) excluded firms cannot effectively compete in the relevant market for the good incorporating the licensed technologies and (2) the pool participants collectively possess market power in the relevant market. If these circumstances exist, the Agencies will evaluate

whether the arrangement's limitations on participation are reasonably related to the efficient development and exploitation of the pooled technologies and will assess the net effect of those limitations in the relevant market. *See* section 4.2.

Another possible anticompetitive effect of pooling arrangements may occur if the arrangement deters or discourages participants from engaging in research and development, thus retarding innovation. For example, a pooling arrangement that requires members to grant licenses to each other for current and future technology at minimal cost may reduce the incentives of its members to engage in research and development because members of the pool have to share their successful research and development and each of the members can free ride on the accomplishments of other pool members. *See generally United States v. Mfrs. Aircraft Ass'n, Inc.*, 1976-1 Trade Cas. (CCH) ¶ 60,810 (S.D.N.Y. 1975); *United States v. Automobile Mfrs. Ass'n*, 307 F. Supp. 617 (C.D. Cal 1969), *appeal dismissed sub nom. City of New York v. United States,* 397 U.S. 248 (1970), *modified sub nom. United States v. Motor Vehicle Mfrs. Ass'n*, 1982–83 Trade Cas. (CCH) ¶ 65,088 (C.D. Cal. 1982). However, such an arrangement can have procompetitive benefits, for example, by exploiting economies of scale and integrating complementary capabilities of the pool members, (including the clearing of blocking positions), and is likely to cause competitive problems only when the arrangement includes a large fraction of the potential research and development in an innovation market. *See* section 3.2.3 and Example 4.

Example 10

Situation: As in Example 9, two of the leading manufacturers of a consumer electronic product hold patents that cover alternative circuit designs for the product. The manufacturers assign several of their patents to a separate corporation wholly owned by the two firms. That corporation licenses the right to use the circuit designs to other consumer product manufacturers and establishes the license royalties. In this example, however, the manufacturers assign to the separate corporation only patents that are blocking. None of the patents assigned to the corporation can be used without infringing a patent owned by the other firm.

Discussion: Unlike the previous example, the joint assignment of patent rights to the wholly owned corporation in this example does not adversely affect competition in the licensed technology among entities that would have been actual or likely potential competitors in the absence of the licensing arrangement. Moreover, the licensing arrangement is likely to have procompetitive benefits in the use of the technology. Because the manufacturers' patents are blocking, the manufacturers are not in a horizontal relationship with respect to those patents. None of the patents can be used without the right to a patent owned by the other firm, so the patents are not substitutable. As in Example 9, the firms are horizontal competitors in the relevant goods market. In the absence of collateral restraints that would likely raise price or reduce output in the relevant goods market or in any other relevant antitrust market and that are

not reasonably related to an efficiency-enhancing integration of economic activity, the evaluating Agency would be unlikely to challenge this arrangement.

5.6 Grantbacks

A grantback is an arrangement under which a licensee agrees to extend to the licensor of intellectual property the right to use the licensee's improvements to the licensed technology. Grantbacks can have procompetitive effects, especially if they are nonexclusive. Such arrangements provide a means for the licensee and the licensor to share risks and reward the licensor for making possible further innovation based on or informed by the licensed technology, and both promote innovation in the first place and promote the subsequent licensing of the results of the innovation. Grantbacks may adversely affect competition, however, if they substantially reduce the licensee's incentives to engage in research and development and thereby limit rivalry in innovation markets.

A non-exclusive grantback allows the licensee to practice its technology and license it to others. Such a grantback provision may be necessary to ensure that the licensor is not prevented from effectively competing because it is denied access to improvements developed with the aid of its own technology. Compared with an exclusive grantback, a non-exclusive grantback, which leaves the licensee free to license improvements technology to others, is less likely to have anticompetitive effects.

The Agencies will evaluate a grantback provision under the rule of reason, *see generally Transparent-Wrap Machine Corp. v. Stokes & Smith Co.*, 329 U.S. 637, 645–48 (1947) (grantback provision in technology license is not per se unlawful), considering its likely effects in light of the overall structure of the licensing arrangement and conditions in the relevant markets. An important factor in the Agencies' analysis of a grantback will be whether the licensor has market power in a relevant technology or innovation market. If the Agencies determine that a particular grantback provision is likely to reduce significantly licensees' incentives to invest in improving the licensed technology, the Agencies will consider the extent to which the grantback provision has offsetting procompetitive effects, such as (1) promoting dissemination of licensees' improvements to the licensed technology, (2) increasing the licensors' incentives to disseminate the licensed technology, or (3) otherwise increasing competition and output in a relevant technology or innovation market. *See* section 4.2. In addition, the Agencies will consider the extent to which grantback provisions in the relevant markets generally increase licensors' incentives to innovate in the first place.

5.7 Acquisition of intellectual property rights

Certain transfers of intellectual property rights are most appropriately analyzed by applying the principles and standards used to analyze mergers, particularly those in the 1992 Horizontal Merger Guidelines. The Agencies will apply a merger analysis to an outright sale by an intellectual property owner of all of its rights to that intellectual property and to a transaction in which a person obtains through grant, sale, or other transfer an exclusive license for intellectual property (i.e., a license that precludes all other persons, including the licensor, from using the licensed intellectual property).[37] Such transactions may be assessed under section 7 of the Clayton Act, sections 1 and 2 of the Sherman Act, and section 5 of the Federal Trade Commission Act.

Example 11

Situation: Omega develops a new, patented pharmaceutical for the treatment of a particular disease. The only drug on the market approved for the treatment of this disease is sold by Delta. Omega's patented drug has almost completed regulatory approval by the Food and Drug Administration. Omega has invested considerable sums in product development and market testing, and initial results show that Omega's drug would be a significant competitor to Delta's. However, rather than enter the market as a direct competitor of Delta, Omega licenses to Delta the right to manufacture and sell Omega's patented drug. The license agreement with Delta is nominally nonexclusive. However, Omega has rejected all requests by other firms to obtain a license to manufacture and sell Omega's patented drug, despite offers by those firms of terms that are reasonable in relation to those in Delta's license.

Discussion: Although Omega's license to Delta is nominally nonexclusive, the circumstances indicate that it is exclusive in fact because Omega has rejected all reasonable offers by other firms for licenses to manufacture and sell Omega's patented drug. The facts of this example indicate that Omega would be a likely potential competitor of Delta in the absence of the licensing arrangement, and thus they are in a horizontal relationship in the relevant goods market that includes drugs for the treatment of this particular disease. The evaluating Agency would apply a merger analysis to this transaction, since it involves an acquisition of a likely potential competitor.

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[37] The safety zone of section 4.3 does not apply to transfers of intellectual property such as those described in this section.

6. Enforcement of invalid intellectual property rights

The Agencies may challenge the enforcement of invalid intellectual property rights as antitrust violations. Enforcement or attempted enforcement of a patent obtained by fraud on the Patent and Trademark Office or the Copyright Office may violate section 2 of the Sherman Act, if all the elements otherwise necessary to establish a section 2 charge are proved, or section 5 of the Federal Trade Commission Act. *Walker Process Equipment, Inc. v. Food Machinery & Chemical Corp.*, 382 U.S. 172 (1965) (patents); *American Cyanamid Co.*, 72 F.T.C. 623, 684–85 (1967), *aff'd sub. nom. Charles Pfizer & Co.*, 401 F.2d 574 (6th Cir. 1968), *cert. denied*, 394 U.S. 920 (1969) (patents); *Michael Anthony Jewelers, Inc. v. Peacock Jewelry, Inc.*, 795 F. Supp. 639, 647 (S.D.N.Y. 1992) (copyrights). Inequitable conduct before the Patent and Trademark Office will not be the basis of a section 2 claim unless the conduct also involves knowing and willful fraud and the other elements of a section 2 claim are present. *Argus Chemical Corp. v. Fibre Glass-Evercoat, Inc.*, 812 F.2d 1381, 1384–85 (Fed. Cir. 1987). Actual or attempted enforcement of patents obtained by inequitable conduct that falls short of fraud under some circumstances may violate section 5 of the Federal Trade Commission Act, *American Cyanamid Co., supra.* Objectively baseless litigation to enforce invalid intellectual property rights may also constitute an element of a violation of the Sherman Act. *See Professional Real Estate Investors, Inc. v. Columbia Pictures Industries, Inc.*, 113 S. Ct. 1920, 1928 (1993) (copyrights); *Handgards, Inc. v. Ethicon, Inc.*, 743 F.2d 1282, 1289 (9th Cir. 1984), *cert. denied*, 469 U.S. 1190 (1985) (patents); *Handgards, Inc. v. Ethicon, Inc.*, 601 F.2d 986, 992–96 (9th Cir. 1979), *cert. denied*, 444 U.S. 1025 (1980) (patents); *CVD, Inc. v. Raytheon Co.*, 769 F.2d 842 (1st Cir. 1985) (trade secrets), *cert. denied*, 475 U.S. 1016 (1986).

EXHIBIT Z

DEPARTMENT OF JUSTICE

COMPETITION AND INTELLECTUAL PROPERTY IN THE U.S.: LICENSING FREEDOM AND THE LIMITS OF ANTITRUST

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I. Introduction

Defining the relationship of intellectual property rights and competition law is an important economic issue in Europe and the United States. This paper attempts to outline some bedrock principles of intellectual property and antitrust policy in the United States, then discuss how they explain, and in some cases require, the current U.S. approach to a series of specific licensing practices. The basic U.S. approach, reflected in the *1995 DOJ/FTC Guidelines for the Licensing of Intellectual Property*, calls for flexible application of economic analysis to licensing practices. And the recent trend has been one of increasing convergence in U.S. and European approaches to IP licensing questions, as seen in the new revisions to the Technology Transfer Block Exemption and accompanying guidelines.

The opening question for this workshop asks whether intellectual property is like other property. This question has been discussed to death many times over in recent years, without much improvement on the answer given ten years ago in the *1995 Guidelines*. In short, for competition law purposes, intellectual property should be treated in essentially the same way as other forms of property, though this does not mean that it is in all respects the same as other forms of property. "Intellectual property is thus neither particularly free from scrutiny under the antitrust laws, nor particularly suspect under them."[1]

This answer means rejection of the hostility toward intellectual property that held sway in the U.S. during the 1970's. During this era, the Antitrust Division had a section devoted to attacking IP licensing practices that we routinely applaud today. This was the era of the "Nine No Nos," during which we applied *per se* rules of illegality to many licensing practices. The

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[1] U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY (April 6, 1995), *at* http://www.usdoj.gov/atr/public/guidelines/ipguide.pdf.

contention that IP should be treated essentially like other forms of property at that time was meant as a call to curtail hostility toward IP rights, a call for the end of disfavored status for IP.

Today, in contrast, our policy is animated by the recognition that IP licensing is generally procompetitive. But the modern answer to the question whether IP is like other forms of property also requires rejection of extreme claims of privilege on the part of IP owners. Today, the statement that IP is essentially like other forms of property is often heard in arguments against claims for complete exemption from antitrust scrutiny. The mere presence of an IP right that somehow figures in a course of otherwise anticompetitive conduct does not act as a talisman that wards off all antitrust enforcement. The classic statement on this point is contained in *United States v. Microsoft Corp.*, 253 F.3d 34 (D.C. Cir. 2001) ("Microsoft's primary copyright argument borders upon the frivolous. The company claims an absolute and unfettered right to use its intellectual property as it wishes. . . . That is no more correct than the proposition that use of one's personal property, such as a baseball bat, cannot give rise to tort liability.").

II. First Principles of U.S. Intellectual Property Law and Antitrust

Sound antitrust enforcement condemns anticompetitive conduct. It does not attempt to regulate the amount of competition in a general sense or address vague questions of fairness. It does not attempt to create an affirmative incentive for procompetitive conduct, by promising any specific reward or legal recognition for competitors who play by the rules. It focuses on specific anticompetitive actions, as judged by their effects on markets and consumer welfare. Although this narrow focus is a limitation, at the same time it is a great strength—it makes possible objectivity, predictability, and transparency.

Intellectual property laws, by contrast, provide a complex system of affirmative rewards for an important type of procompetitive behavior—innovation. They take consumer welfare into account, but in different ways than does antitrust. First, they reward innovators with exclusive rights that serve as an incentive to bring new and improved goods and services to market. The hope is that such innovations will lead to increased competition and increased consumer welfare in the long term. Second, they strike a balance between these rights and certain types of public access, such as fair use under copyright law[2] or the disclosure requirement and the limited term of patents.[3] They also include a fail-safe procedure under which a rival or a customer can sue to declare an intellectual property right noninfringed or unenforceable for a number of reasons. So the legislature, via the IP laws, has struck a balance between the rights of IP owners, the rights of consumers, and concerns for a competitive marketplace. This may or may not be the correct balance; nevertheless, it is the one the legislature has chosen.

It is important to understand precisely what reward is offered by the IP laws. Each type of IP right provides "exclusivity" for its owner. What does this exclusivity mean? It does not mean a right to commercialize any invention or creation. The owner of an improvement patent, for example, may find itself blocked from practicing its own patent if it cannot secure permission from the original patentee. Instead, what IP rights provide is the right to exclude others. The right to exclude is not simply *one* of the rights provided by intellectual property, it is the *fundamental* right, the foundation upon which the entire IP system is built.

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[2] 17 U.S.C. § 107.

[3] 35 U.S.C. § 271(e)(1).

III. Specific Practices and the Freedom to License

These bedrock principles of antitrust and intellectual property law inform the proper approach to specific licensing and IP-related practices. A decade's experience with the *Guidelines*, together with subsequent judicial precedent, provide reliable guidance on several issues in the U.S. On many, but not all, of these issues, it is also possible to rely on continued transatlantic convergence.

- **Unilateral Refusals to License Technology**

The subject of unilateral refusals to license intellectual property is one in which the premise that IP is essentially like other forms of property has sometimes been stretched beyond sensible limits. Because, outside the area of IP, antitrust law holds out the possibility of rare exceptions to the principle that parties are free unilaterally to refuse to deal with others, the argument is that there must therefore be *some* circumstance in which the unilateral, unconditional refusal to license a patent must constitute an antitrust violation. With a single much-criticized exception, this is an argument that has never found support in any U.S. legal decision. At this point in the development of U.S. law, it is safe to say that this argument is without merit.

A unilateral, unconditional refusal to license a valid patent cannot, by itself, result in antitrust liability under U.S. law. It is instructive that the very notion of such liability was not even discussed in the *1995 Guidelines*. Instead, the *Guidelines* unequivocally state that, even in the case of IP that conveys market or monopoly power, that power does not "impose on the intellectual property owner an obligation to license the use of that property to others."[4] This is hardly surprising, as the right to choose whether the license has long been recognized by the U.S.

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[4] *Guidelines* Section 2.2.

Supreme Court as the core of the patent right.[5] Although the Supreme Court decisions are not directly on point, lower courts have correctly held that the unilateral, unconditional refusal to license a valid patent does not give rise to liability as an improper refusal to deal under Section 2 of the Sherman Act.[6] But of course, while an intellectual property owner has the right to decide not to license its technology, the owner does not have the right to impose conditions on licensees that would effectively extend an intellectual property right beyond the limits of the Patent Act.[7]

The clarity of U.S. law on unilateral refusals was enhanced by last year's Supreme Court decision in *Verizon Communications Inc. v. Law Offices of Curtis V. Trinko, LLP.*[8] In *Trinko*, the Supreme Court found that private plaintiffs did not state an antitrust claim when they alleged a failure by a communications provider, Verizon, to provide adequate assistance to its rivals. The

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[5] *See, e.g., Bement v. National Harrow Co.*, 186 U.S. 70, 90 (1902) ("[The patentee's] title is excleusive, and so clearly within the constitutional provisions in respect of private property that he is neither bound to use his discovery himself nor permit others to use it."); *United States v. United Shoe Mach. Co.*, 247 U. 32, 57 (1918) (reasoning that the exercise of "the right to exclude others from the use of the invention . . . is not an offense against the Anti-Trust Act."); *Hartford-Empire Co. v. United States*, 323 U.S. 386, 432 (1945) ("A patent owner is not in the position of quasi-trustee for the public or under any obligation to see that the public acquires the free right to use the invention. He has no obligation either to use it or to grant its use to others."); *Simpson v. Union Oil Co.*, 377 U.S. 13, 24 (1964) ("[t]he patent laws[,] which give a 17-year monopoly on 'making, using, or selling the invention[,]' are *in pari materia* with the antitrust laws and modify them *pro tanto*").

[6] *See, e.g., In re Indep. Serv. Orgs. Antitrust Litig.*, 203 F.3d 1322, 1325-28 (Fed. Cir. 2000), *cert. denied*, 531 U.S. 1143 (2001); *Miller Instituform of N. Am., Inc.*, 830 F.2d 606, 609 (6th Cir. 1987), *cert. denied*, 484 U.S. 1064 (1988); *SCM Corp. v. Xerox Corp.*, 645 F.2d 1195, 1204-07 (2d Cir. 1981), *cert. denied*, 455 U.S. 1016 (1982); *but cf. Image Tech. Servs., Inc., v. Eastman Kodak Co.*, 125 F.3d 1195, 1219 (9th Cir. 1997) (permitting antitrust liability if refusal to license is "pretextual"), *cert. denied*, 523 U.S. 1094 (1998).

[7] *See Mercoid Corp. v. Mid-Continent Investment Co.*, 320 U.S. 661, 666 (1944) ("The fact that the patentee has the power to refuse a license does not enable him to enlarge the monopoly of the patent by the expedient of attaching conditions to its use.").

[8] 540 U.S. 398 (2004).

Court showed great skepticism about expanding liability for the refusal to deal because such liability "may lessen the incentive for the monopolist, the rival, or both to invest in . . . economically beneficial facilities" and "also requires antitrust courts to act as central planners . . . a role for which they are ill-suited."[9] The Court posed the question as being whether the narrow list of exceptions to the general rule against liability should be expanded.[10] Although *Trinko* was not an intellectual property case—the rights in that case were governed by the Telecommunications Act—the Supreme Court would apply similar logic under the Patent Act. Given the many cases indicating that the right to exclude is a fundamental right embodied in the patent grant, it is safe to say that liability for the unilateral, unconditional refusal to license a valid patent is not going to be added to the narrow list of exceptions the Court mentioned.

When analyzing the effects of a unilateral refusal to deal, one cannot merely consider the effect on a rival that is refused a license; one must also consider the alternative world in which the IP owner would have had less of an incentive to innovate because he could not be assured of the right to refuse to license. Would that IP owner have chosen to innovate less? If so, would competition or consumer welfare have been better off with the present state of affairs, including the right to refuse? In the *short* term, it will always be more efficient to disregard the IP right and allow duplication. The IP system rests on the idea of *long*-term innovation incentives, so we must think about the long-term effects of a rule imposing liability in this context. That is entirely consistent with antitrust policy related to exclusionary conduct, which also focuses on dynamic competition and long-term effects. Where we cannot reliably predict the effects of enforcement

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[9] *Id.* at 407, 414-15.

[10] *Id.* at 408.

decisions, false positives are likely, and the increased uncertainty itself will raise costs to businesses and enforcers.

It is useful to remember that the creation of intellectual property tends to add to consumer choices, rather than to reduce them. The development of intellectual property for new technological solutions usually does not cause older solutions to be withdrawn from a marketplace; instead, it increases competition, which tends to erode the prices of the old solutions over time, increasing choice and consumer welfare. Of course, a patent sometimes issues for an obvious or previously-known solution to a problem, but such a patent should be invalidated, and the proper remedy is to seek invalidation under the patent laws.

Does this mean that the policy on unilateral refusals conflicts with EU law as stated in *IMS Health*?[11] At this time, that it is difficult to tell. The European Court of Justice decision, issued a year ago, began by stating that a refusal to license a copyright "cannot in itself" constitute an abuse of a dominant position. That seems to match the U.S. view on unilateral refusals to license. But the court added that liability might occur if: (1) the refusal prevents the emergence of a new product for which consumer demand exists; (2) the refusal is not justified by any objective considerations; and (3) the refusal excludes competition in a "secondary market." It is not clear how these three factors will be interpreted, or whether the same reasoning would apply to other contexts such as a refusal to license a patent. (Some have observed that the IP right asserted in *IMS* was relatively weak, and that the lack of a unified European system of IP rights may explain differing attitudes toward antitrust liability in this context.) It will be interesting to

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[11] *See* IMS Health GmbH & Co. OHG, Case C-418/01 (April 29, 2004) at ¶¶ 34, 38, 53, *at* http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexplus!prod!CELEXnumdoc&lg=en&numdoc=62001J0418.

see how the *IMS Health* decision is applied, for example in the *Microsoft* appeal. While the Justice Department required Microsoft to make certain IP available to its competitors as part of the agreed *remedy* for antitrust violations, the European Commission imposed *liability* for the failure to make IP available. It will be up to the Court of First Instance to determine whether this was permissible under EU law.

- **"Excessive" Royalties in Standard Setting and Beyond**

The Antitrust Division sometimes hears complaints about demands for large royalties. Most frequently, although not always, the complaints arise in the context of a technical standard. According to the complainants, one or more patent holders can "hold up" licensees by waiting until participants are locked into the standard, then charging an allegedly "excessive" royalty for patents that cover the standard. The U.S. Federal Trade Commission has brought antitrust enforcement actions related to this issue in two recent cases, *Rambus* and *Unocal*. Both cases are ongoing.

Bringing a complaint to the Antitrust Division about "excessive" royalties, without more, is a losing strategy. Antitrust enforcers are not in the business of price control. We protect a competitive process, not a particular result, and particularly not a specific price. In fact, if a monopoly is lawfully obtained, whether derived from IP rights or otherwise, we do not even object to setting a monopoly price. A high patent royalty rate, after all, might just reflect that the Patent Act is functioning correctly and the market is rewarding an inventor for a pioneering invention. When a complainant begins a presentation by telling the Antitrust Division that a royalty rate is "excessive," the staff responds that the complainant is putting the cart before the horse. A complaining party must first identify some anticompetitive conduct beyond a mere

unilateral refusal to license and beyond the mere attempt to charge, where a lawful monopoly exists, a monopoly price.

Many situations of standard setting "hold up" can be mitigated by disclosure in the ex ante phase, before the standard is set. For example, if all participants are required to disclose their financial interest in any version of the standard—including any patents they own or are seeking on the technology—other participants can adjust their behavior accordingly. If a participant agrees to disclose but then fails to do so, it can be liable for breach of contract or fraud. Such liability would hinge on a pattern of breaches, frauds, or other unlawful conduct. If antitrust liability is also contemplated, it would require, in addition, proof of market effects.

Increasingly, standards development organizations are requiring "reasonable and non-discriminatory" (RAND) licensing, which is a partial solution. A difficulty of RAND, however, is that the parties tend to disagree later about what level of royalty rate is "reasonable." It would be useful to clarify the legal status of ex ante negotiations over price. Some standards development organizations have reported to the Department of Justice that they currently avoid any discussion of actual royalty rates, due in part to fear of antitrust liability.[12] It would be a strange result if antitrust policy is being used to prevent price competition. There is a possibility of anticompetitive effects from ex ante license fee negotiations, but it seems only reasonable to balance that concern against the inefficiencies of ex post negotiations and licensing hold up. It is

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[12] Standards development organizations have identified *Sony Electronics, Inc. v. Soundview Technologies, Inc.*, 157 F. Supp. 2d 180 (D. Conn. 2001), as a case that raises the possibility of antitrust liability for ex ante negotiations. In that decision, a district court refused to dismiss an antitrust claim based on the allegation that standards-setters made a group decision, after a standard had been adopted, to refuse to license a patent and to sue to have the patent invalidated. Although the court refused to dismiss the antitrust claim in an initial pretrial ruling, it later dismissed the claim when the patent was found to be invalid.

interesting to note that the EU licensing guidelines already address this point: in their Paragraph 225, the guidelines state that firms normally should be allowed to negotiate royalty rates before a standard setting effort, as well as after a standard is set.

Barriers to discussing licensing rates may not be entirely law-related. Some standard setting participants do not want the distraction of considering licensing terms. Engineers and other technical contributors may prefer to leave the lawyers at home and limit discussions to technical issues alone. So there may be powerful incentives to keep the status quo. If that is the case, this may be yet another area where the outcomes can be imperfect but antitrust does not provide a solution.

- **Compulsory Licensing**

Compulsory licensing is another place where enforcers need to be fully aware of antitrust's limitations.[13] Licensing can be an effective remedy in some contexts; for example, for merger cases, it can serve as a less drastic alternative to a divestiture. But in the first instance, there must be conduct that warrants a remedy—licensing is only a remedy, not a liability theory. And there are practical reasons to tread carefully when considering compulsory licensing: designing and enforcing such licenses is complex and can be an invitation to endless ancillary compliance litigation. As explained in the *Trinko* case, an enforcement agency should not impose a duty to deal that it cannot reasonably supervise, since this risks assuming the day-to-day controls characteristic of a regulatory agency. For these and other reasons, compulsory licensing of intellectual property as an antitrust remedy should be a rare beast.

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[13] *See* Makan Delrahim, Forcing Firms to Share the Sandbox: Compulsory Licensing of Intellectual Property Rights and Antitrust, address before the British Institute of International and Comparative Law (May 10, 2004), *at* http://www.usdoj.gov/atr/public/speeches/203627.pdf.

- **"Excessive Patenting" and Patent Enforceability**

There has been much talk in recent years, and perhaps worldwide, about whether there is a problem of "excessive patenting," meaning patents being granted too easily or in too great a number. Of course, it is the job of the U.S. Patent and Trademark Office in the Department of Commerce—not the Department of Justice—to make and regulate awards of patent rights. The PTO has mechanisms for reconsidering specific patents and hearing complaints about the patent system as a whole, and it employs untold hundreds of patent experts. The Federal Trade Commission, an independent agency, has issued a useful report on possible improvements to the patent system.[14] The National Academies have also issued a report.[15]

It is open to question whether antitrust analysis, which is specific and effects-based, can be applied to a question as broad as "excessive patenting." To know whether patenting is excessive, we would first have to make a conclusion about the "but-for" world. If fewer patents were granted, would innovation have decreased? Would firms have reduced their research and development in areas that currently are covered by patents, and would the result have been fewer benefits for consumers? Antitrust enforcement is not well suited to answering such questions. These questions should be directed, instead, to the patent authorities or to legislators.

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[14] FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY (2003), *at* http://www.ftc.gov/os/2003/10/innovationrpt.pdf.

[15] NATIONAL ACADEMY OF SCIENCES, A PATENT SYSTEM FOR THE 21ST CENTURY (2004), *at* http://books.nap.edu/catalog/10976.html.

Of course, this point must not be overstated. Part of the patent system is court review of patent enforceability.[16] In the appropriate case the Antitrust Division will examine enforceability and, if necessary, challenge the validity or scope of a patent as part of an antitrust claim. This is not necessary where a patent-related practice will be lawful (or at least, does not violate the antitrust laws) or unlawful regardless of the patent's enforceability. But if the conduct would have violated the antitrust laws in the absence of patent rights, is difficult to address fundamental questions about the but-for world—here, meaning the world that would have existed without the allegedly anticompetitive patent-related practice—unless one knows whether the patent owner could have won an infringement claim. If the patent is valid, all entry before its expiration is a competitive "gift," but if it is invalid, any delay in entry due to threatened patent enforcement is a competitive harm. Just three months ago, an appellate court asserted this need to examine the but-for world in a case involving the antitrust analysis of a patent settlement. According to the court, it is impossible to measure a patent settlement's effect on competition unless one first makes a conclusion about the validity and enforceability of the patent.[17] A petition for rehearing in that case is pending.

- **IP Rights and Market Power**

Last on my list of specific issues is the concept of market power. Intellectual property cannot be *presumed* to establish market power. While intellectual property grants exclusive

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[16] Although the terms are often used interchangeably, "enforceability" is a broader concept than "patent validity." Patents may be unenforceable against a particular alleged infringer for many reasons, including lack of validity, lack of infringement, fraud in the procurement of the patent, misuse, and other inequitable conduct.

[17] *See Schering-Plough Corp. v. Federal Trade Commission*, 402 F.3d 1056 (11th Cir. 2005).

rights, these rights are not monopolies in the economic sense: they do not necessarily provide a large share of any commercial market and they do not necessarily lead to the ability to raise prices in a market. A single patent, for example, may have dozens of close substitutes. The mere presence of an intellectual property right does not permit an antitrust enforcer to skip the crucial steps of market definition and determining market effects.

In the view of the Department of Justice and the Federal Trade Commission, the idea that IP rights cannot be presumed to create market power is a settled question. Interestingly, however, there is still some debate in courts that decide private party antitrust claims. In the January 2005 case *Independent Ink*,[18] the Federal Circuit—which handles all direct patent appeals in the United States—held that Supreme Court precedent[19] compelled it to conclude that a patent *does* raise a presumption of market power in an IP tying case. But even the Federal Circuit disagreed with the presumption; in fact, the Federal Circuit's opinion invited the Supreme Court to reverse. The patentees in this case filed a petition for Supreme Court review. If the Supreme Court agrees to take the case, it would provide a good opportunity to settle the question once and for all.

Many other IP issues arise at the competition law interface. With respect to patent pools, the Antitrust Division has issued several "Business Review Letters" analyzing proposed licensing arrangements.[20] Package licensing, bundling, and tying all receive some coverage in our

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[18] *Independent Ink, Inc. v. Illinois Tool Works, Inc.*, 396 F.3d 1342 (Fed. Cir. 2005).

[19] *See, e.g.*, *Jefferson Parish Hospital Dist. No. 2 v. Hyde*, 466 U.S. 2, 16 (1984); *International Salt Co. v. U.S.*, 332 U.S. 392 (1947).

[20] Letter from Joel I. Klein, Assistant Attorney General, U.S. Dep't of Justice, to Carey R. Ramos, Esq. (June 10, 1999), *at* http://www.usdoj.gov/atr/public/busreview/2485.pdf; Letter from Joel I. Klein, Assistant Attorney General, U.S. Dep't of Justice, to Garrard R. Beeney, Esq. (Dec. 16, 1998), *at* http://www.usdoj.gov/atr/public/busreview/2121.wpd; Letter from Joel I. Klein, Acting Assistant Attorney General, U.S. Dep't of Justice, to G[a]rrard R.

Guidelines. Our general approach is to avoid rigid tests and instead rely on a review of the likely economic effects to the marketplace as a whole, both in the short term and over the long term, factoring in incentives for procompetitive innovation. Both IP law and competition law seek to maintain dynamic, robustly innovative markets far into the future, and to that end they properly are willing to tolerate—or rather, offer the inducement of—a degree of private reward and market power in the present day.

IV. Conclusion

We have made great strides in the United States in bringing sound economics to the antitrust analysis of intellectual property. Europe is doing the same with the newly revised Technology Transfer Block Exemption and its accompanying licensing guidelines, both of which embrace an effects-based analysis for licensing transactions.[21] We have experienced significant international convergence in this area and we have every reason to expect more of the same. While some differences remain between the U.S., the EU, and our other important trading partners, the general trend toward convergence is continuing.

Beeney, Esq. (June 26, 1997), *at* http://www.usdoj.gov/atr/public/busreview/1170.wpd.

[21] *See* Commission publications regarding the TTBE and guidelines at http://europa.eu.int/comm/competition/antitrust/legislation/entente3_en.html#technology.

EXHIBIT AA

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BODY:

OPERATOR: Ladies and gentlemen, thank you for standing by. Welcome to the QUALCOMM first-quarter conference call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session. (OPERATOR INSTRUCTIONS). As a reminder, this conference is being recorded January 19, 2005. The playback number for today's call is 1-800-633-8284. International callers please dial 1-402-977-9140. The playback reservation number is 21219395.

I would now like to turn the call over to Mr. Bill Davidson, Vice President of Investor Relations. Bill, please go ahead.

BILL DAVIDSON, VP, IR, QUALCOMM, INC.: Thank you, and good afternoon. Today's call will include prepared remarks by Dr. Irwin Jacobs and Bill Keitel. Tony Thornley, Dr. Paul Jacobs, Steve Altman and Dr. Sanjay Jha will participate during the question-and-answer period following the prepared remarks. An Internet presentation and audio broadcast accompanies this call, and you can access it by visiting www.QUALCOMM.com. During this conference call, if we use any non-GAAP financial measures, as defined by the SEC and Regulation G, you can find the required reconciliations to GAAP on our website. I would also direct you to our 10-Q and earnings release, which were filed and furnished, respectively, with the SEC today and are available on our website.

We are pleased that we achieved the high end of our prior revenue guidance and exceeded the high end of our prior guidance for diluted earnings per share, for both total QUALCOMM and QUALCOMM excluding QSI. Following opening remarks from Dr. Jacobs and Bill Keitel, I will pose some initial questions and then open the call to your questions.

And now, it's my pleasure to introduce Dr. Irwin Jacobs, Chairman and CEO.

DR. IRWIN JACOBS, CHAIRMAN & CEO, QUALCOMM, INC.: Thank you, Bill, and good afternoon, everyone. We are pleased to report strong results for the first quarter, with solid growth in our chip and technology licensing businesses. The increased deployment and expansion of third-generation CDMA networks continues to drive these businesses. Operators in most regions of the world are now actively pursuing the transition from 2G, often TDMA, networks to 3G CDMA networks. Over 150 million consumers and enterprises in the US, Korea, Japan and elsewhere are now using products and services enabled by third-generation CDMA networks. Early 3G operators have demonstrated a competitive advantage, motivating 2G operators to move rapidly to offer competitive systems and devices. We believe we are well-positioned to further increase our share of the WCDMA chipset market, with our target of 50 percent.

We continue to increase our staff and budget for research and development, focused on broad feature integration and convergence, taking advantage of our ability to amortize the R&D over both CDMA 2000 1x, IxEV-DO and WCDMA chipsets. Our chips are being incorporated into more handset models by more manufacturers, supporting further growth of DO and WCDMA networks, a lowering of ASPs for WCDMA handsets and a growing replacement cycle enabled by DO.

In December, we welcomed the announcement of the merger of Sprint and Nextel. Both companies have been strong QUALCOMM partners, and we're confident that the combined company will further accelerate expansion of the 3G CDMA market here in the United States. We look forward to working closely with Sprint and Nextel in improving

existing services and introducing innovative new services. We remain focused on early commercial availability of low-latency QChat, push-to-talk and EV-DO Rev A.

Mobile multimedia is rapidly gaining traction in the United States. Last week at the Consumer Electronics Show in Las Vegas, Nevada, senior Verizon Wireless executives announced the launch of VCAST, the nation's first 1xEV-DO wireless multimedia service for consumers. VCAST brings high-quality video, 3-D games and music to new 3G phones, operating on Verizon's rapidly expanding 1xEV-DO network. Starting February 1st, VCAST will support video-on-demand services, including current news, weather, sports and entertainment programming, including music videos and short programs specifically designed for mobile phones.

Operators worldwide are increasingly recognizing the importance of reasonably priced, high-speed data offerings for consumers and enterprise. Cingular has announced plans to deploy HSDPA — high-speed downlink packet access — possibly by year end. In Japan, DoCoMo is planning an early launch of HSDPA to be competitive with the expanding EV-DO services provided by KDDI. We are working closely with operators in Europe to support their introduction of HSDPA. QUALCOMM's experience in the development of EV-DO and of the features supported by high-speed data service positions us well to supply highly-integrated chipset solutions with HSDPA. We successfully sampled our first HSDPA chip, the MSM6275, last quarter and are actively supporting tests with operators.

WCDMA is now available in 29 countries from 62 operators. QCT is committed to supporting handset manufacturers through chipset integration and segmentation, and lowering the cost of all 3G handsets while expanding capabilities.

In Latin America, penetration is up, driven by strong competition and improved networks. In Brazil, CDMA operator VIVO has expanded CDMA coverage, and continues to leverage the strength of their CDMA2000 network by offering a range of BREW applications. They recently introduced a variety of location-based services based on QUALCOMM's gpsOne technology, from finding points of interest to providing driving directions and maps. VIVO has also introduced compelling 1xEV-DO multimedia services such as real-time streaming video of city traffic conditions, webcam monitoring, games and premium video content for news and sports.

Although CDMA subscriber growth in India this year has been somewhat slower than we anticipated, Reliance Infocom is the largest wireless operator and has crossed the 10 million mark for CDMA subscribers. TATA has attracted 2.4 million CDMA subscribers, and is in the final stages of a nationwide network rollout. By March 2005, Reliance is expected to provide CDMA service in 5,000 cities, and TATA is expected to provide coverage in most Indian states. We expect DSNL to use CDMA for its rural expansion plans.

In China, China Unicom continues to grow its CDMA subscribers base, and has introduced multi-mode GSM and CDMA products aimed at high-end users. Unicom is conducting market trials with EV-DO in several cities, while awaiting the 3G license decision. It now appears that that decision will be forthcoming by mid-2005, substantially increasing the market for CDMA.

Our Wireless Business Solutions business has had additional success with GlobalTRACS, its construction equipment management solution, including adoption by Ryan Incorporated Central, one of the largest US operators, specializing in site work and mass excavation. In transportation, we announced deployment of our new T2 untethered TrailerTRACS asset management solution by Schneider National, a leading provider of transportation and logistics services. Schneider has begun installation across its 48,000 trailer fleet. We also introduced new features for OmniTRACS to increase security for hazardous material and high-value cargo carriers, and we expanded our OmniTRACS coverage footprint to all 50 states, including Alaska and Hawaii.

QUALCOMM Internet Services continues to drive the downloadable applications marketplace, with more than 200 million downloads of BREW applications and content as of November, 2004. Several BREW announcements in Q1 demonstrated BREW's flexibility and value for the entire mobile marketplace, including publishers and developers, handset manufacturers and operators. Collaborating with Opera Software, we introduced mobile users to contextual shopping capabilities, via Opera's mobile Web browser and the BREW solution. Contextual shopping allows operators to enhance their subscribers' wireless Internet experience with a feature-rich shopping experience.

We introduced advanced firmware from Insignia Solutions and Bitfone Corporation, supporting over-the-air update capabilities via BREW. These capabilities enable wireless operators and handset manufacturers to remotely flash a BREW-enabled device's firmware, repairing software flaws or adding new functions, eliminating the need for more costly and time-consuming in-store cable-based updates and massive device recalls. BREW, of course, operates across

air interfaces. A number of BREW-based wireless applications first available on CDMA2000 1x can now be downloaded and run on the BenQ S80 WCDMA UMTS GSM/GPRS dual-mode handset.

To lower the cost of delivering rich multimedia to cellular devices, we recently announced Platinum Multicast, an evolution of CDMA2000 1xEV-DO and FLO, or Forward-Link Only, a new air interface. We also announced plans for a subsidiary, MediaFLO USA, Inc., to support nationwide delivery of content to mobile devices. MediaFLO USA is preparing to deploy and operate a mediacasting network utilizing nationwide 700 MHz spectrum for which QUALCOMM holds licenses. This network is planned as a shared resource for US CDMA2000 and WCDMA cellular operators, enabling them to deliver mobile interactive multimedia to their wireless subscribers without the cost of network deployment and operation. It will be based on the FLO technology, and will use the MediaFLO media distribution system for content aggregation, delivery and viewing, supporting 50 to 100 national and local content channels, including up to 15 live streaming channels and numerous clipcast and audio channels. This content will be delivered in an easy-to-use and familiar format, at quality levels that dramatically surpass current mobile multimedia offerings through the use of QVGA video at up to 30 frames per second and high-quality stereo audio. We expect to begin commercial operation of the new network in 2006.

There has been a great deal of media speculation regarding WiMAX and the potential for it to eventually develop into a standard for wide area wireless broadband connectivity, making it a major 3G CDMA competitor. I believe WiMAX will be useful for backhaul and possibly some fixed and limited mobility applications, depending on spectrum availability and competition from DSL and cable-based Internet services, as well as 3G CDMA. The WiMAX standard for mobile services is still in development, encompassing a variety of bandwidth and frequency bands, both paired and unpaired. It does not appear to me that mobile WiMAX offers any theoretical or practical advantages compared to CDMA, will require a major investment for testing and iterations and will be late to a market well supported with a variety of 3G CDMA devices and services.

QUALCOMM continues to execute extremely well. Clearly, we have the financial strength and other resources needed to continue supporting customers worldwide with a broad range of new technology. Our ability to generate cash allows us to continue our growth, expand our extensive research and development programs, and to return value to stockholders.

Lastly, I'd like to point out that QUALCOMM was just named to Fortune's 100 Best Companies to Work For, for the seventh consecutive year. I congratulate all QUALCOMM employees for creating a culture that is focused on execution and recognizes and rewards performance.

I'd now like to turn the call over to Bill Keitel, who will discuss our financial results.

BILL KEITEL, EVP & CFO, QUALCOMM, INC.: Thank you, Irwin, and good afternoon, everyone. Last quarter, I explained that effective with the September quarter, we now report royalty revenue based solely on licensee reports. The change was made prospectively, and therefore, our fiscal 2004 GAAP results do not reflect a full year of the economic performance of the Company's licensing business. For that reason, my remarks this afternoon will compare 2005 to 2004 as if the new method of royalty accounting had been in effect for all of fiscal 2004.

I am pleased report that first-quarter fiscal 2005 revenues were 1.4 billion and diluted earnings per share were 30 cents. The QUALCOMM strategic initiative segment or QSI contributed 2 cents per share in the first quarter. We recorded 51 million in net realized gains on QSI investments and 3 million in gains on derivative instruments, partially offset by 14 million in QSI operating expenses. As previously disclosed, the QSI segment now includes the operating expenses for our new MediaFLO operator business.

Our core business revenues, which exclude QSI, were 1.4 billion for the December quarter, up 21 percent year over year and up 1 percent sequentially. Net income of 474 million increased 21 percent year over year and decreased 5 percent sequentially. Diluted earnings per share were 28 cents, a 17 percent increase from last year and a 7 percent decrease sequentially.

Turning to our segment results, QCT, our chip business, recorded revenues of 865 million, an increase of 15 percent year over year and an increase of 2 percent sequentially. QCT earnings before tax were 242 million, down 8 percent year over year and down 11 percent sequentially, due primarily to our major new investments in R&D. QCT's operating margin was 28 percent. QCT shipped approximately 39 million MSM phone chips, tying the record of MSM phone chip shipments set in the September quarter. Shipments of the 6000 series of MSMs increased approximately 50 percent from the September quarter, indicating excellent progress from our ZIF fab partners and high demand from our customers for

the efficiency and features of our 6000 series products. Some supply constraints did continue in the quarter, but we remain on target for resolution in the March quarter.

QUALCOMM Wireless and Internet or QWI reported revenue and earnings of 159 million and 16 million, respectively, in the December quarter. QWI revenues increased 19 percent year over year and 3 percent sequentially, largely due to the continued expansion of BREW customers and BREW products.

QTL, our licensing business, reported first-quarter revenues of 400 million and a 90 percent operating margin. Revenues grew 33 percent year over year and decreased 1 percent sequentially. Of the 400 million QTL revenues, 35 million represented intracompany royalties, 16 million was license fees and 349 million was royalties from licensees.

WCDMA royalties contributed approximately 32 percent of total royalties reported by licensees in December for shipments in the September quarter, indicating WCDMA networks are continuing to expand and attract subscribers. WCDMA royalties were approximately 26 percent of total royalties reported in the prior quarter, which represented shipments for the June quarter. Worldwide CDMA handsets shipped in the September quarter were approximately 40 million units. We believe total CDMA channel inventories were approximately 18 weeks at the end of December, within the normal band of 15 to 20 weeks that we have observed in the last several years.

The average selling price of CDMA phones was approximately $212 for the September quarter, in line with our guidance at the outset of the quarter. Research and development expenses in the first quarter were $228 million, up 52 percent year over year, largely due to increased headcount related to chip development and initiatives to support multimedia applications, wireless Internet access and multimode, multiband, multinetwork products including CDMA2000 1xEV-DO, WCDMA and HSDPA.

Selling, general and administrative expenses were 148 million for the quarter, up 21 percent year over year, largely due to employee costs to support an expanding worldwide customer base, as well as professional fees related to legal, patent and audit activities.

Our effective tax rate for fiscal 2005 is estimated to be approximately 28 percent for total QUALCOMM and approximately 30 percent excluding QSI. The effective tax rate in the first quarter of fiscal 2005 was approximately 27 percent for total QUALCOMM and 29 percent excluding QSI.

Cash, cash equivalents and marketable securities increased to approximately $8 billion at the end of December compared to 7.6 billion at the end of September.

Based on the current business outlook, we are increasing our earnings guidance for fiscal 2005. We estimate that revenues excluding QSI will be approximately 5.8 to 6.3 billion, up approximately 16 to 26 percent year over year. We anticipate earnings per share excluding QSI of $1.16 to $1.20, an increase of approximately 8 to 12 percent over fiscal 2004.

Our estimate for calendar 2005 CDMA handset shipments remains unchanged, at a range of 218 to 228 million units. Based on the 223 million unit midpoint of this range, we expect shipments of approximately 55 million WCDMA handsets and 168 million CDMA2000 handsets. We have adjusted slightly the WCDMA unit split between the Europe and Asia regions. Our investor relations website has a detailed breakdown of this estimate by region and technology. CDMA handset shipments for calendar year 2004 are estimated to be approximately 164 to 167 million units, reflecting actual shipments for September and our new December quarter estimate. This revised estimate for 2004 also includes a small downward revision of previously reported handset shipments identified by one of our licensees in December. Based on the current business outlook, we estimate that handsets ASPs will average approximately $215 for fiscal 2005, compared to approximately $205 for fiscal 2004.

Turning to the second-quarter financial guidance, we now estimate that approximately 46 to 49 million CDMA handsets will ship in the December quarter, slightly lower than our prior estimate of 48 to 52 million units. On a regional basis, we estimate some softness in China and India as well as Korea, though Korea and India appear to have picked up somewhat very recently. Softness in these regions is expected to be offset by strength in Japan, North America and Latin America, in addition to growing WCDMA volumes in Western Europe.

We expect second-quarter revenues to be approximately 1.35 to 1.45 billion, and diluted earnings per share excluding QSI to be approximately 25 to 27 cents. These estimates are based on shipments of approximately 35 to 37 million MSM phone chips during the March quarter, a slight decrease sequentially, although consistent with the seasonality we've often

seen historically.

We estimate that total operating expenses in the March quarter will grow approximately 14 to 17 percent sequentially, driven by continued investment in our chip business and to support wireless data applications, products and services, as well as increased resources for our growing customer base around the world. As well, you will recall that QUALCOMM operating expenses increased in our second fiscal quarter, due to seasonal factors including employee-related payroll taxes. For handsets that shipped in the December quarter, we now estimate the average selling price will be approximately $214, driven by increased handset functionality and features in 3G networks.

In closing, I'm pleased by our first-quarter results, and I'm encouraged by increased confidence in our fiscal 2005 outlook.

That concludes my comments. I will now turn the call over to Bill Davidson to facilitate some initial questions.

BILL DAVIDSON: Thank you, Bill. I'd like to begin by asking some of the more common questions we have receiving from analysts and investors, and I'll start with a question for Tony.

What are the markets to watch in calendar year 2005 that could positively impact QUALCOMM's business?

TONY THORNLEY, PRESIDENT & COO, QUALCOMM, INC.: Well, I think both Irwin and Bill have spoken significantly about the markets around the world. So I'll just summarize by saying that I feel the momentum in most of the markets is strong, positive, and that we will certainly be looking at growth in the second half of the year over the first half of the year in 2005 — particularly, the US, with EV-DO really beginning to take off in the handset market; Europe, with WCDMA taking off; Japan, with DoCoMo and Vodafone focusing very much on transition from the PDC networks to WCDMA, driven by competition from KDDI. And then, in the emerging markets, certainly, the 3G licensing decision in China has got to be a strong positive for us in the second half, if only for Unicom, given that they are already in the market but also, I think, beginning for the others. And then in India, we have already said that we see strengthening in all of the operators there, and I would add Southeast Asia, which is a market that is growing significantly, although from a low base.

BILL DAVIDSON: Thank you, Tony. And now, a question for you, Paul. QUALCOMM issued a number of press releases last year discussing various iterations of airlink advances in DO and the introduction of FLO technology. Can you describe the significance of these advances and what an operator's migration path will be along this technology curve?

DR. PAUL JACOBS, EVP & PRESIDENT, QUALCOMM WIRELESS & INTERNET GROUP, QUALCOMM, INC.: Sure, Bill. The technologies that we are developing now on the radio side are really not just about providing higher throughput, but we are really trying to optimize these technologies for specific applications. So, in the case of DO Rev A or DORA, as we like to call it, we have higher data rates, but we especially have higher data rates on the reverse link, which reflects the fact that there's cameras and video being built into the phones, and so the phones are actually generating more data now that wants to be shared over the network. In addition, we have lower latency built in for things like multiplayer gaming and push-to-talk and voice-over-IP type applications.

Fundamentally, as we look forward, we are really continuing to drive down the cost per bit, particularly for multimedia applications. One application that we saw happen in Korea that was very popular was sending broadcast video over the phone, and what we saw there is that consumers readily adopted it when it was a flat rate service, but really didn't adopt it when it was a per-packet service, meaning that the more video they watched, the more it cost them. And if you think about it from an operator's standpoint, the economics are kind of — don't work out that well. Voice service they sell for — you know, it's a 4 kbps service; they sell it for 10 to 15 cents a minute. And here we have customers wanting multimedia services that take 16 to 100 times more data throughput for flat rate. So we had to find a way to fix those economics, and one of the things we did to start off with was over the existing DO networks, we built the MediaFLO Content Distribution System, which essentially lifted the video out of the peak time and took advantage of the fact that the memory cost is one of the fastest dropping cost components in the phone.

But then we said, okay, how can we fix things to make it even better? And so we brought out the DO Gold and DO Platinum Multicast systems. And what happens with multicast is that you go from having, say, 100 people watching the same piece of video content being streamed — well, in standard DO, 100 channels have to be brought up. In a multicast system, one channel gets brought up and 100 people can receive it simultaneously. The difference between Gold and Platinum is an increase in performance capabilities, and Platinum takes advantage of the way that DO is structured to allow us to enhance the air interface or the radio interface, and still remain backward-compatible with the existing

systems.

Then we said, well, how can we even make it better than that? And that's where we came up with the FLO technology, where we use high-powered transmitters, tall towers, a different layout than a cellular layout, and do the same kind of multicasting to lots of handsets at the same time.

Now, how an operator would roll these things out together is that we have actually integrated, particularly in the MediaFLO client, the way to combine the 3G cellular network along with the FLO network. And that allows carriers to differentiate their services by running both interactive applications or other content that they have acquired themselves over their DO network and seamlessly integrate it, from a user's point of view, into the handset and into the service. A FLO is a Forward-Link Only service, and therefore we do depend on the DO network, the cellular network, for the reverse link and for interactivity.

That brings me to the MediaFLO USA, Inc., which is an operator business that we set up as a subsidiary, really to speed the deployment of this technology in the United States, as Irwin said, in spectrum that we own nationwide. Now, QUALCOMM's intent over the long term is not to be an operator, and so we are actively considering spinning that business off in the future.

One thing that's a piece of recent news is that we just appointed Rich Sulpizio as Interim President for MediaFLO. And he's going to be in charge of both MediaFLO USA and the technology development for MediaFLO. And for those of you who don't know Rich, Rich is currently a member of our Board of Directors. He retired in August of 2001 as our company's President and Chief Operating Officer, and has helped us recently, including playing leadership roles in the development of our China and European organizations. So, in the role that Rich will be playing here, he'll have responsibility for developing and deploying the technology for wholesaling the content delivery services to US wireless operators to deploy the network nationwide, including the operation of the network operating center and clearing the spectrum, doing the acquisition and aggregation of multimedia content and working with our licensees to make sure that the handsets are available. We are extremely excited to have Rich onboard, and look forward to him making MediaFLO a great success.

BILL DAVIDSON: Thanks, Paul. Next, a question for Steve. Steve, QUALCOMM issued a press release regarding the recent injunction issued against Maxim. What does this mean for both Maxim and QUALCOMM?

STEVE ALTMAN, EVP & PRESIDENT, QUALCOMM TECHNOLOGY LICENSING, QUALCOMM, INC.: Well, first, we were very pleased with the outcome of this. At a very early stage in the hearing, the court concluded that we have shown by a preponderance of the evidence that we will succeed on the merits improving that Maxim has misappropriated QUALCOMM's trade secrets in violation of California law. They also concluded that Maxim's actions were predatory.

As a result of this, the court issued an injunction against Maxim from continuing current and future acts of misappropriation of QUALCOMM's trade secrets. Now, although Maxim can continue to sell the chips, the RF chips that they have been selling, they do so at a great deal of risk because, if the court later concludes that those chips in fact contain the trade secrets that have been misappropriated from us, in addition to damages to QUALCOMM, Maxim — as well as their individual officers, directors and employees — risk civil and potentially criminal contempt remedies. Maxim is also required to deliver a copy of the judge's order to all of its customers of these chips.

So we are very pleased with the result. We continue to fight vigorously to protect our chip trade secrets and our proprietary technology from infringement, and we take it very seriously, and we only do so when we feel that our actions are justified.

Also, I think it's been pointed out you can actually find a copy of the judge's order on our website, for those that are interested in reading the entirety of it.

BILL DAVIDSON: Sanjay, two questions for you, if I may. The first one — QCT found its — or can you please describe recent trends in both the CDMA2000 and WCDMA markets?

DR. SANJAY JHA, EVP & PRESIDENT, QUALCOMM CDMA TECHNOLOGIES GROUP, QUALCOMM, INC.: Sure, Bill. I think we are very well-positioned with our product, in terms of performance and segmentation and pricing in the marketplace, and I'd like to take some of our product lines and describe them to you in terms of the traction we are getting in the marketplace. Using our 6000 chipset, as well as 6025 chipset, and combining that with our low-cost RF CMOS solution, we believe that we are driving now the marketplace in India, Brazil, Southeast Asia and China, with very

low-cost handsets which enable for operators there to compete against the GSM operators in their local markets and drive the growth of CDMA.

In the United States and Korea and Japan, we have seen our 6100 chipset, which has the integrated microprocessor and significant multimedia functionality, being very successful in driving up to 20 handsets in the marketplace, and has been received very well by the consumer base in each of these marketplaces.

6500 DO chipset — based on 6500, we are now beginning to see handsets becoming available in the United States and Korea and Japan, and we are very hopeful that as Verizon migrates, as they indicated in their public announcements, to DO-based handsets being the majority of the handsets being shipped, that 6500-based handsets and 6550, which has yet further level of integration and high level of multimedia functionality. So the handsets based on 6500 and 6550 will become available in the United States and elsewhere to deliver multimedia on-demand services around the world.

We have had up to 40 design wins based on our multimedia for integrated services, things like QT&V, things like Qcamcorders, things like audio processing, as well as our camera interface and based, again, on 6100, 6500, 6250 and 6550 chip sets. We are also driving DO Revision A. We sampled, as Irwin mentioned, CSM 6800 in December last year, and in March, we'll sample the MSM 6800 to support the development, interop testing and then eventually deployment of DO Revision A. DO Revision A, you may recall, has 3.1 Mbps of peak data rates in the forward-link, and it has support for 1.8 Mbps of reverse-link data and supports latencies down to 30 to 40 milliseconds — so much so, in fact, that we believe it will be capable of supporting voice-over-IP services. So, certainly, development of DO Revision A provides yet another competitive advantage to DO operators.

So those are the CDMA2000 chipsets. In wideband CDMA, we see the deployments accelerating, and certainly, the results coming from Hutchison of 86.8 million subscribers were very encouraging. We had outlined a 55 million subscriber handset shipment this year, and we believe that the market is tracking to those numbers. There already have been a number of handset launches based on 6250. Irwin mentioned the BenQ handset, and the Sanyo handset was launched on Orange network. We believe there will be maybe as many as 10 more devices launched based on our 6250 handsets in the course of first two quarters this year.

Speaking of HSDPA, we sampled — we believe we have the most integrated and first solution of HSDPA in the marketplace, and we sampled that in December last year. We have already been able to do some testing, and we have demonstrated mobile calls at between 1 and 1.2 Mbps, sustained for as long as 20 minutes. So we think that we are ahead in the level of integration now with the level of interoperability testing. We think that we are ahead of others improving out (ph) the system and helping operators, UMTS operators worldwide, in deploying HSDPA on an aggressive schedule.

BILL DAVIDSON: Great. Now for my second question. QCT found itself supply-constrained throughout fiscal 2004. Can you tell us the progress you've made in eliminating the constraint, and what you've done to prevent this from happening again in the future?

DR. SANJAY JHA: Well, consistent with our guidance to the street in our November analyst meeting in London and our last conference call here, we believe that we will be out of any supply constraints starting from February this year. We will have no supply constraints on our MSM or our RF or our VAR management devices. So, having been in this constraint, I want to thank all of our partners — IBM, TSMC, Motorola or Freescale now and Atmel, UMC — in supporting us through a dramatic increase in our demand, demand which increased last year from 99 million to 137 million. So we want to thank them. And we now believe that, with the forecast that we have from our customers of demand for the rest of the year, that we will be fully able to meet all the demands that they have.

In terms of what we're doing to make sure that this doesn't occur again, we have already put in place some long-term supply agreements with our customers, and we have also, as a result of acquisition of our Spike team in India, been able to second-source more of our chipsets to more of the fabs to make sure that we have increased capacity available to us. So, again, I think we have made tremendous progress.

BILL DAVIDSON: Thanks, Sanjay. That concludes my questions. Operator, we are ready for questions from the call participants.

OPERATOR: (OPERATOR INSTRUCTIONS). Tim Luke, Lehman Brothers.

TIM LUKE, ANALYST, LEHMAN BROTHERS: I was wondering, Bill, if in switching the EPS guidance for the full year, if you could have given us a sense of why the EPS, with an unchanged revenue and ASP picture, may have gone up

slightly for the full year. I was also wondering whether you could give us a sense of how you see your channel inventories in some of the different regions. And as part of that, obviously, you were suggesting that in the December quarter, the market size was slightly lower than you had anticipated, given China, India and Korea are slightly softer. How do you see that for March?

BILL KEITEL: In terms of the full year and increasing our earnings guidance, I do see revenues a tad higher, but it rounded off within the billion levels that I guided to. So you are not seeing that; it's a small number.

Within the business, we're seeing — I see a slightly improved margin going forward. Sanjay spoke to the rapid movement to the ZIF product line, so we're seeing a little bit of improvement there. I am seeing also a little better picture on our investment income going forward.

But I think, Tim, from my perspective, as I look through the year, the most encouraging thing to me is the penny increase is nice, but we did a thorough review of the markets and the business and came right back to the space we were at three months ago. So I think that's encouraging, that I feel a bit better now about the guidance for the year than what I did just a couple months ago.

On the channel, last time we were on the call, I thought the channel had moved up to approximately 17 weeks. And if you recall, a normal band going back several years is in the range of 15 to 20 weeks. Our estimate for the December quarter is that channel has moved up to approximately 18 weeks, so still well within what is a historical norm.

Our visibility to divide that channel up by region of the world is pretty difficult. At any given time, you're going to have a distributor or a handset guy probably with a bit more inventory than they want, but for us to pinpoint that around the world is pretty difficult.

TIM LUKE: With respect to your expenses going forward, then, your expenses in the December quarter appeared to come in slightly below some of the expectation. How should we think about the expense profile for the March period?

BILL KEITEL: Expenses did come in a bit lower. I think it's timing. I don't see it as a net positive for the year. In fact, I'll share with you that we added more than 600 employees to our base in the December quarter. So we are approximately 8,400 employees at the end of December. So we are pretty much on target to be bringing in these extra primarily R&D resources for the programs that we've got lined up ahead. So I do think it's timing, and I think for the March quarter, we'll see an increase of op expenses in the range of 14 to 17 percent.

TIM LUKE: Lastly, one clarification. I think you mentioned that there was a vendor who adjusted their shipment number to you. Could give us any further detail on that?

BILL KEITEL: It's a very rare circumstance, but a licensee did identify and was able to provide the evidence to us that in fact they had double-counted some CDMA phone shipments. So they identified that to us in the December quarter. We refunded the money. And it was in the range of about a million units for 2004.

TIM LUKE: Did that affect the quarterly market size in handsets or not?

BILL KEITEL: The quarterly size of handsets — I expect to see in the range of 46 to 49 handsets shipped in the December quarter. In the March quarter — within that range. I'm not going to give a specific number, but we're within that range. So I do expect the channel inventory to decrease a bit by the end of the March quarter.

OPERATOR: Satya Chillara, RBC Capital Markets.

Ms. Chillara, your line is open. You may now proceed. It appears that she is not available.

Louis Gerhardy, Morgan Stanley.

LOUIS GERHARDY, ANALYST, MORGAN STANLEY: A question for Bill and then one for Sanjay. Just back to the operating expenses, Bill — I thought I heard you say you added 600 heads in the December quarter, but operating expenses were only up 3 percent sequentially.

And the second to Sanjay was, it looks like the MSM had a nice increase in average selling price, and can you just provide some more color? Was that due to a mix of WCDMA or a higher attach rate for radioOne — or maybe you could weight the issues that drove that increase?

BILL KEITEL: I'll take your first question on the operating expenses. Yes, we grew our headcount substantially — a

little more weighted toward the end of the quarter than early in the quarter, number one. Number two, employees drive the bulk of our expenses, but there are other items that can be lumpy from time to time. And the December quarter proved to be quite low for those type of expenses. But I think we're on track here. I think we got in a very strong base of good employees in December, and I expect us to be pretty much on track to the guidance for operating expenses that I gave three months ago.

TONY THORNLEY: And as you mentioned, Bill, the payroll taxes is always favorable in the December quarter.

BILL KEITEL: Yes. It kicks up in January, but the most favorable quarter is December.

DR. SANJAY JHA: Louis, in response to your question about ASP of MSM (indiscernible) MSM ASP was marginally higher in this quarter. There are two reasons, really. One was that the migration, of course, to 6000 series, which are the radioOne chipset, our RF attach rate goes up. So that helps us.

But I think a bigger reason is that we're seeing tremendous success of the 6100, 6250 and 6500 chipsets, which are slightly higher ASP chipsets, because of the level of multimedia and microprocessor integration there.

LOUIS GERHARDY: Do you have a cumulative WCDMA number that you have shipped, Sanjay, in QCT?

DR. SANJAY JHA: I don't believe that we have broken that out so far.

LOUIS GERHARDY: How about an outlook for CSM in the March quarter?

DR. SANJAY JHA: We have not provided that outlook, though our expectation at present time is that significant network upgrades have occurred in the second half of last year, and that the CSM volume will be down sequentially.

OPERATOR: Brian Modoff, Deutsche Bank.

BRIAN MODOFF, ANALYST, DEUTSCHE BANK: First, a clarification or just some further explanation on the guidance, and then a couple of questions — one for Irwin and then one for Sanjay. On QTL revenues, what are you expecting in your guidance for your fiscal Q2? What are you expecting QTL revenues to be, in what range?

BILL KEITEL: I'm expecting an increase, Louis, in the QTL revenues. I don't break up the segments in our guidance specifically, but I am expecting the handsets to grow from approximately 40 million to up to approximately 46 to 49. And as I indicated, I expect the ASPs to increase a couple dollars. So we should see a pretty good revenue increase in QTL for the March quarter.

BRIAN MODOFF: And, Irwin, you talked about the drivers kind of for the back half of the year. What do you see as your drivers in the front half of the year? What kind of sequential unit volume increase are you expecting in WCDMA handsets? And what are the drivers you see out there? What markets do you see as providing strength in the first half of this year?

DR. IRWIN JACOBS: Well, with WCDMA, we've seen some good growth over in Japan, and DoCoMo continues to focus on bringing out new models and growing that. In Europe, there have been a number of announcements of new models. There have been some good purchases by Hutchison, and apparently good sale-through (ph). So I think Europe will continue to grow. Now, how that times out over a quarter is always a little bit harder to project, but we think that in fact, this is the year that WCDMA is going to move toward significant volumes, and that's why we've got that in our estimate.

BRIAN MODOFF: Do you expect WCDMA unit volumes to be up sequentially from Q4 for the industry overall?

DR. IRWIN JACOBS: Again, I think it probably is still a little bit too early to tell.

BRIAN MODOFF: And in terms of the other markets, where do you see opportunities in CDMA for growth in the first half of the year?

DR. IRWIN JACOBS: Well, we are quite excited about DO, now that the DO phones, for example, are here in the US, first one. And I expect there will be additional ones shortly, and with new capabilities that I think will prove to be quite exciting — new services coming along, as well. So I think that we will be seeing the growth here.

BRIAN MODOFF: And then, Sanjay, in terms of the — can you talk a little bit about WCDMA competition? And also, I noticed on the operating margin it dropped down a little, to 28 percent in the quarter, something you had commented on earlier that you thought it might come into that range. Do you expect it to kind of stay in this range?

DR. SANJAY JHA: I'm taking the operating margin question first. We, at the beginning of the year — in fact, in November analyst meeting, we guided to 26 to 27 percent operating margin for the whole year. I expect that in the coming quarter, we'll have a sequential decline in our operating margin, but I think we're definitely on track to meet or exceed the 26 to 27 guidance that we provided for the year.

In terms of competition in wideband CDMA, I think the names are the familiar ones. I think EMP has been quite successful at Hutchison. Nokia is out there with two, I believe, solutions. Motorola has been quite successful with their one-euro (ph) phone, or at least Vodafone is advertising that as one-euro phone, and Vodafone will push that phone quite hard in the December quarter. So I think that those are the main competitive threats that we see for us right now.

OPERATOR: James Faucette, Pacific Crest.

JAMES FAUCETTE, ANALYST, PACIFIC CREST: I just wanted to ask a clarifying question on the number of handsets you estimate were shipped in the December quarter. I know you said 47 to 49 million, but I wasn't clear if the 1 million adjustment was included in that 47 to 49 cents — if there hadn't been the adjustment, that it would have been 48 to 50?

BILL KEITEL: Sure, James. The one million adjustment that a licensee identified was from earlier in calendar 2004. So the 46 to 49 is a couple units less than what we had previously estimated for the December quarter. We had estimated most recently 48 to 52. So it's a direct comparable to the points we spoke of. We think South Korea, India and China are a bit softer than what we expected. But then recent data at the end of the quarter was positive for a couple of those markets.

JAMES FAUCETTE: That's great. That helps a lot. And then, as far as channel inventories and so on, I know you say you are at 18 weeks. Is that what you're seeing for both CDMA and WCDMA combined? And if so, can you kind of talk about how we should expect that to develop over time, especially if you are going to see a rapid ramp in WCDMA shipments that may not match the sell-through?

BILL KEITEL: I think over time, WCDMA will come to mirror CDMA2000, but with all the launches that are occurring on WCDMA, it's a little — it's still going through somewhat of an initiation phase, as I would call it. But I think over time, I would expect CDMA2000 and WCDMA to be very similar.

JAMES FAUCETTE: But right now, that 18 weeks includes both WCDMA and CDMA?

BILL KEITEL: That's correct, James.

JAMES FAUCETTE: And finally, the last question. And I guess this is more a question with regards to forecasting. This is the second kind of quarter where the actual handset shipments came in a little bit lighter then maybe your initial forecast. How do you feel going forward? I know you indicated that things seemed to pick up late in the December quarter, but do you feel like your forecasts maybe are more conservative now, or are you taking very much the same approach as you have in the past?

BILL KEITEL: Well, any time we miss a forecast, we're looking back to see what could we have done differently to improve our process. That's just a regular thing we do. But from time to time, you are going to see the results be a bit above or a bit below our forecast. But as a whole, I think we've done quite well, and I look at what other companies do in forecasting the handset market, and I feel we're doing better than most. But, James, any time we miss, we take it seriously. And we are looking back hard at our process.

OPERATOR: John Bucher, Harris Nesbitt Gerard.

JOHN BUCHER, ANALYST, HARRIS NESBITT GERARD: A question for Sanjay regarding HSDPA. There's been some speculation in the press about the possibility that some carriers would go directly to HSDPA. I'm just wondering how would Sanjay view such a trend, from the standpoint of making his business unit more or less competitive in that environment?

DR. SANJAY JHA: I would view that as a very positive thing for our business unit. We believe that we're ahead of most everyone in HSDPA and in the level integration, as well as proving out the solution in-field and to help the deployment of HSDPA.

I do think, though, that most people are taking a path to HSDPA through UMTS — first of all, people like Cingular, people like Vodafone, people like DoCoMo, people like Orange, people like T-Mobile. But there have been some players who have not, so far, deployed in the UMTS network are considering going directly to HSDPA, and we would be very

pleased to support such deployments as we're doing throughout the industry.

JOHN BUCHER: Do you see the potential for that happening any other place beside the one instance you mentioned in North America?

DR. SANJAY JHA: In North America, it's my view that they will probably go to UMTS first of all, and then migrate very, very rapidly to HSDPA. But I don't see explicit instances of folks going directly to HSDPA, though within the next six to nine months, that will begin to happen.

DR. IRWIN JACOBS: I think the voice market will be an important part of the 3G and a part of WCDMA, but I think everybody is seeing that data is contributing significantly to revenues, that it is better both from a user experience to have the higher data rates, but also because it lowers the cost of data and puts less stress on their infrastructure and spectrum usage. And so the sooner you can move to HSDPA, the better. I think you'll also find that most operators and manufacturers are going to want to move to the uplink higher-speed capabilities, as well. And then there will be yet another step beyond that, as they try to reduce latency on the WCDMA side. So it's very important to get as good a user experience as early as possible, and be able to offer that at an effective price, in order to rapidly grow the business.

DR. SANJAY JHA: Just to add, also, that in response to your question, I think that most people will deploy network first and upgrade it to HSDPA, but in terms of requirement for handsets, I think the requirement — HSDPA will become a requirement for handsets very, very quickly, I believe. And to your point, I think that will be a net positive for QUALCOMM.

DR. IRWIN JACOBS: Well, thank you all for joining us this afternoon. Again, we are very pleased with our Q1. We are pleased with the way that the 3G is moving ahead throughout the world. We expect that there will be a number of additional exciting developments over these next several quarters. The new chips are coming out, the new software to support those chips, new networks. And so I think we are all going to be keeping quite busy, to make sure that these are well-received and that there is good revenue coming back for the operators as well as, hopefully, manufacturers and ourselves. Thank you again very much.

OPERATOR: Ladies and gentlemen, that does conclude the conference call for today. We thank you for your participation, and ask that you please disconnect your lines.

LOAD-DATE: February 3, 2005

EXHIBIT BB

Joint DOJ-FTC Hearings on
Competition and Intellectual Property Law and Policy in the
Knowledge-Based Economy

Charles James

Opening Day Comments

February 6, 2002FTC Room 432
2:00 p.m.

Good afternoon. It is a pleasure to be here to address you on the opening day of these hearings, during which the Department of Justice and the Federal Trade Commission will take a close look at the intersection of antitrust law and intellectual property law. Together, we are about to delve deeply into an intellectually exciting topic, one of keen relevance to the missions of both our agencies.

These hearings are the first to be jointly sponsored by the FTC and the Antitrust Division. I thank Chairman Muris for inviting us to participate in this significant endeavor. I note that there are many knowledgeable and able speakers with very interesting things to say this afternoon, including Mr. James Rogan, Under Secretary of Commerce for Intellectual Property and Director of the U. S. Patent and Trademark Office; the Honorable Pauline Newman of the U.S. Court of Appeals for the Federal Circuit; and Professor Robert Pitofsky, the recent former Chairman of the FTC, so I will try to keep my remarks short.

In recent decades, there has been increasing recognition on the part of antitrust enforcers and the courts that intellectual property and antitrust law share the common purpose of promoting dynamic competition and thereby enhancing consumer welfare. Intellectual property law provides incentives for innovation and its dissemination and commercialization by establishing enforceable property rights in new products and processes and original works of expression. These property rights reward innovation and creativity by eliminating certain forms of imitation and unauthorized use. Antitrust law promotes dynamic competition and consumer welfare by prohibiting certain conduct by market participants that unreasonably constrains the competitive process. More than ever before, the creation and dissemination of intellectual property is the engine driving economic growth and consumer satisfaction. Consequently, as antitrust law addresses the competitive implications of conduct involving intellectual property, and as intellectual property law addresses the nature and scope of intellectual property rights, care must be taken to maintain proper incentives for the innovation and creativity on which our national economy depends.

We at the agencies approach these hearings with open minds. We are going to hear from panels of business people, academics and practitioners representing a wide range of views on topics central to the debate about IP and antitrust policy. The diversity of these panels should stimulate interesting and, at times, intense discussions. I would like to spend my time with you today previewing some of the issues lying at the heart of the intersection between antitrust and intellectual property law that we will encourage participants to explore during these hearings. (I note that up to date information about these hearings and how to contact us is available on both our websites: the Division's at www.usdoj.gov/atr and the FTC's at www.ftc.gov).

General issues

The Division and the FTC described our enforcement perspectives in this area in the joint 1995 *Antitrust Guidelines for the Licensing of Intellectual Property*. Let me assure all of you that we embark on these hearings neither to rehash the *Guidelines* nor to critique them. We are, however, quite interested in learning what real-world licensing issues people are now confronting and how they can best be approached under the antitrust laws. Of course many topics are possible, but unfortunately our available time is not infinitely expandable. In mapping out areas of interest, we have found it helpful to break up intellectual property licensing practices into several flexible sub-groups: licensing practices by a single IP holder, practices by multiple IP holders, refusals to license IP and finally, comparing U.S. practice in these areas to that elsewhere in the world.

For convenience, there are several issues of particular interest that we have classified as licensing practices by a

single IP holder. The first is the bundling of intellectual property rights through means such as package licensing. While the bundling of these rights appears to offer significant potential efficiencies in situations where multiple licenses are needed, they may also raise antitrust concerns if they threaten competition in the development and licensing of intellectual property.

Similarly, grant backs, which require a licensee to grant back to the licensor a right to use the licensee's patented improvements to the licensor's invention, can also have procompetitive effects, but can adversely affect competition in some instances. As the Section 5.6 of the *Guidelines* describe, grant backs can allow a licensee and licensor to share risks, and reward the licensor for making possible further innovation based on or informed by the licensed technology. But grant backs can also reduce a licensee's incentive to innovate. These hearings may help inform us about the current use of grant backs. Are they used in situations that cause competitive concern? Alternatively, does antitrust uncertainty inhibit the use of efficiency-enhancing grant backs?

We will also encourage discussion of the competitive impact of licensing restrictions, payments or agreements not to compete that extend beyond the life of the intellectual property being licensed.

Refusals to license

Some of the most frequently discussed and debated areas of licensing practices involve the refusal to license patents and copyrights. Debate in this area has been heightened by the Federal Circuit's opinion 18 months ago, *CSU v. Xerox*, involving Xerox's refusal to continue supplying patented repair parts to independent service organizations. During the course of these hearings, we will encourage participants to examine the degree to which holders of intellectual property are refusing to grant licenses, and whether such refusals to license raise competitive concerns. We will facilitate discussion of the current jurisprudence in this area, including how it is affecting current licensing practices and if there are circumstances in which a refusal to license may raise antitrust concerns. Participants may also investigate how the *CSU* opinion is being interpreted by the lower courts, and the possible implications of this opinion in other areas, including the review of licensing agreements that are conditioned on other actions, such as dealing exclusively with the patentee, cross-licensing another patent, or purchasing other products.

Patent pooling

We are interested in facilitating discussion of collective intellectual property rights organizations, such as patent pools, as well as cross-licensing agreements. Both patent pools and cross-licensing agreements are methods by which industries seek to commercialize new technology that is covered by many overlapping intellectual property rights. In the late 1990s, the Division examined through the Business Review process three different proposals to jointly license patents to other companies, an MPEG patent pool (a video compression technology) and two DVD patent pools. In all three cases, the Division concluded that the proposed arrangements did not appear to pose antitrust concerns.

The Division's decisions rested on a number of factors, including the fact that the pools license only those patents essential for a manufacturer to comply with an established standard. The pools were designed to capture the efficiencies that may come from licensing complementary technologies. Concomitantly, they were designed to limit the anticompetitive effect that can arise from pooling technology, such as the elimination of competition or the increase in prices that could arise if substitute technologies (that is, technologies that could compete against each other) were placed in a pool.

In these hearings, we will encourage exploration of a number of broad questions about patents pools, such as whether pools actually result in the competitive problems they are hypothesized to cause and whether the antitrust authorities have focused on the right criteria when evaluating patent pools. We will also suggest that participants address practical issues such as how the term "essential" should be defined and whether the identity of the administrator of the pool matters.

Standard setting

The legal and economics professions have long recognized the potential value of industrial compatibility standards, especially in industries that exhibit network effects. Such standards are an important element of our discussion of intellectual property right issues because standards can facilitate the development of new products

based on new technologies and because standard setting often involves firms' disclosing and sharing patented technology. One goal for these hearings is to improve our understanding of how various standard setting practices promote innovation and competition, and how various practices might result in abuses of market power or disincentives for innovation.

Compatibility between products can greatly enhance their value to consumers and businesses. For example, technical standards for digitizing data have proven vital for the usefulness and commercial viability of cellular phones, CDs, CD players, Internet communications, and a host of other products. However, the standard setting process generally requires that competitors come together to coordinate on a technological standard. In such a setting, there are opportunities for anticompetitive behavior as companies exert their influence over the process. After a standard has been established, there are many issues regarding access to the technology embodied in the standard; limited access could restrict the number of competitors in a market and severely inhibit entry. In some cases, we might want to consider whether consumer welfare is best served by having the industry settle on a single standard or by encouraging the development of multiple competing standards. We will encourage participants in these hearings to discuss the influence of intellectual property and antitrust law on real world standard setting.

Practical issues

In addition to addressing these particular licensing practices, these hearings will also focus on some practical issues that often arise in the antitrust analysis of licensing activity. Both agencies are increasingly facing questions regarding the scope and validity of patent rights in assessing the competitive effects of transactions. For example, we often must determine as an initial matter whether a licensor and licensee should be viewed as having a horizontal relationship. Under the IP Guidelines (§ 3.3), we focus on what would happen absent a license, that is, whether (and to what degree) the IP right would foreclose the licensee from being an actual or likely potential competitor in the relevant market. And the answer, as with so much else in life, is "it depends." It depends in large part on whether the patent is valid and on its scope.

Similarly, in a merger review, a party may argue that its intellectual property creates a blocking position for the entire field. The party claims that a merger with what may appear to be a competitor actually poses no competition problems, because that "competitor" can only compete by infringing.

We will encourage discussion on the standards and methods the agencies and courts should use to make judgments regarding validity and scope that are needed for sound antitrust analysis. Where and how should we draw the line between accepting the IP holder's position at face-value or a potential competitor's position that it could effectively compete without infringing the intellectual property? What weight should the agencies give to existing market conditions in situations where there are numerous firms competing--notwithstanding a claimed IP blocking position? Or suppose that significant questions exist about the breadth of a firm's patent position. The patents may not completely block the field, but no one knows for sure. In determining the ease and likelihood of entry into that relevant market, should we assess a potential entrant's risk of infringement and the cost of defending a possible infringement action? Does potential rivalry mean the ability to compete free from risk of infringement liability?

International Issues

Our interest in the interaction of antitrust and IP law is not parochially limited to understanding how these issues are being addressed in the United States. Refusals to deal, licensing and standards, topics that are at the center of IP-based antitrust disputes in the United States, routinely have effects that reach far beyond our borders. On a regular basis, antitrust enforcers in multiple jurisdictions are asked to address complex antitrust issues arising from "borderless" intellectual property. An understanding of empirical and legal approaches to IP and antitrust in other countries may well serve to clear the underbrush in what has been called the "IP thicket."

Many of our international colleagues have already undertaken the process of reviewing their competition and IP laws. In December 2001, the EU published a Green Paper evaluating the Technology Transfer Block Exemption, and is presently in the process of receiving comments on proposed changes. Australia, Canada and the UK, to name only three countries, have recently addressed the intersection of competition and IP. In the EU, refusals to license are the subject of pending litigation, in which courts are reviewing what "exceptional circumstances" may justify compulsory access to intellectual property under the EU's antitrust provisions.

Antitrust disputes involving IP are being played out in "real time," with direct effects on consumers around the world. These hearings provide an opportunity to enhance mutual understanding with our global antitrust law counterparts and we are looking forward to the international contributions to these hearings.

Conclusion

We have a number of interesting discussions ahead of us that will enhance our understanding of how antitrust and IP law and policy affect innovation and other aspects of consumer welfare. We in the Antitrust Division have our sleeves rolled up and are ready to facilitate productive discussions in conjunction with the FTC. We look forward to this opportunity to hearing your views on these significant issues.